

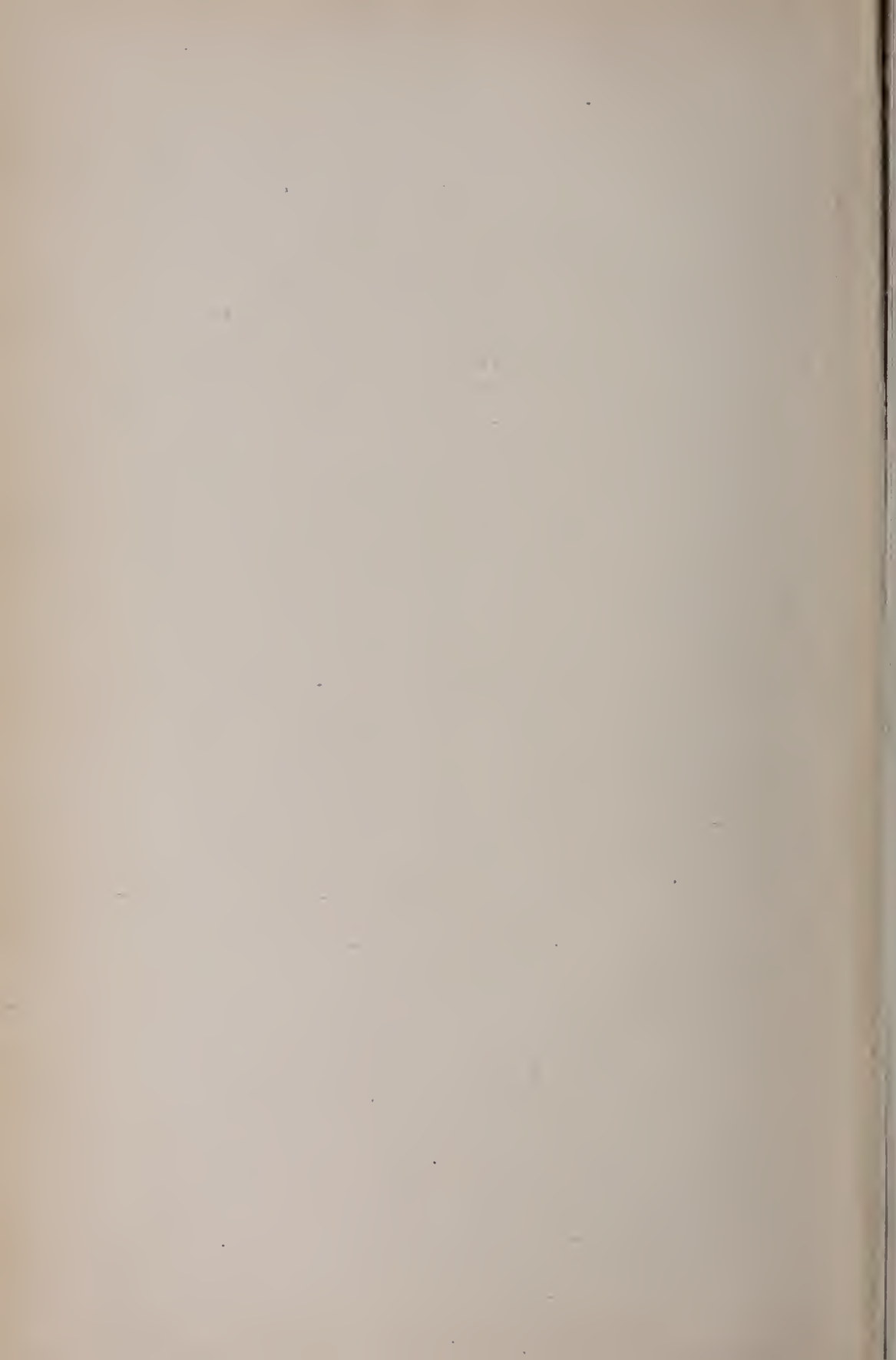
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The Ohio State Medical Journal

VOL. VI

JANUARY 15, 1910

No. 1

ORIGINAL ARTICLES

THE DIAGNOSIS AND TREATMENT OF ECTOPIC PREGNANCY.

HUNTER ROBB, M. D.,
Cleveland, Ohio.

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[Read before the Section on Medicine of the Ohio State Medical Society, at Cincinnati, Ohio, May 7, 1909.]

The general practitioner is the one who is most likely to meet with cases of ectopic pregnancy in their incipency, and upon his forethought and sagacity in a large measure will depend the outcome. As you are all undoubtedly aware during the past two years there has been a great deal of discussion on this subject in this country and abroad and the results on the whole have been beneficial. Among some of the benefits derived may be mentioned the fact that not a few operators who at first would admit of no other method of procedure but that of immediate operation in each and every ruptured case, now take a more conservative view and admit that, so far as the immediate operation is concerned for the loss of blood, it is necessary only in about five per cent of the cases. This is in marked contrast to the opinions that formerly were almost universally prevalent.

A considerable experience in operating upon cases of ectopic gestation has impressed me with the fact that in a large number of cases the patients come to operation only after months, and in some instances apparently after years have elapsed since the establishment of the lesion. Moreover, in a large number the diagnosis is not suspected until after the abdomen has been opened. At times I have found a considerable amount of free blood in the abdominal cavity and yet the general condition of the patient at the time of the operation was excellent and apparently she was not suffering to any appreciable extent from the loss of blood, but more from the inflammatory conditions involving the Fallopian

tubes and the pelvic peritoneum. I have also operated upon a number of these patients while they were in a marked condition of shock, thus carrying out the so-called immediate operation, and in many instances my results have been unsatisfactory. On the other hand, I have operated upon a relatively large number of patients after they had reacted from the condition of shock, although they had before been in a state of collapse more or less complete. With these cases the results have been far more satisfactory. Speaking, then, from my own experience, I cannot but feel that the question as to the best method of treating such patients is not one that can be settled off hand and once for all by the emphatic statements of those who have instituted treatment only from the standpoint of the immediate operation.

Some of the points that should render us suspicious of this conditions are as follows: (1) When a patient comes to us with a history that she has missed one or more periods and gives the symptoms belonging to pregnancy, and at the same time has attacks of severe pain in the lower part of the abdomen—sometimes worse on one side—which double her up and even bring on fainting attacks, we must first think of a threatened abortion and then of an extrauterine pregnancy. Sometimes there is a slight more or less continuous bloody discharge which the patient may have taken to be a continued menstrual period. (2) The patient may give a history of a more or less prolonged period of sterility. Not a few of the cases of ectopic pregnancy occur in women who have been sterile for some years. (3) A previous history of an ectopic pregnancy is important, as one such abnormal pregnancy seems to predispose to another. (4) A condition of shock when the patient is first seen, with some such history as the foregoing should put us on the alert. Rupture has probably taken place. In other cases, however, the woman may be in good condition.

With such a clinical history a careful, but gentle vaginal examination should be made, and unless one can be absolutely certain that there are no lateral masses, or free or encysted blood

present in the pelvis, the patient should be examined by one who has had special training in this work. If on the first examination nothing at all abnormal can be made out, but the patient continues to complain and presents symptoms suggestive of a miscarriage, it is still necessary to call a specialist in consultation.

Now suppose the physician feels convinced that he has an ectopic gestation to deal with; what line of treatment should be instituted? If he has a leaning towards surgery, or if he is easily frightened (as he perhaps will be if he follows the teachings that are generally insisted upon as being necessary when such a condition is known to exist), and if he is not in touch with an abdominal surgeon, he will feel it his bounden duty to perform the operation himself.

However, I feel sure that a goodly number of those present today after witnessing a number of these operations and seeing in many instances only a small amount of blood present have wondered why it was necessary to perform an emergency operation. Again, you will probably call to mind that in some cases in which a fatal termination followed the operation either while the patient was on the table or soon afterward, some of these patients seemed to succumb to shock alone, since at operation only a small amount of blood was found in the abdomen, and in those cases in which a considerable amount of free or clotted blood was present it was open to question whether the bleeding *per se* had produced the collapse. Moreover, after the operation has been apparently successful a certain number of these women die later of peritonitis or some other complication.

But let us consider the source of hemorrhage in a ruptured ectopic pregnancy. In about 75 per cent of the cases it results from a tubal abortion during the first few weeks of pregnancy, generally between the third or eighth week of gestation, and most often within the first three weeks. With a tubal abortion, as a rule, there is not any great outpouring of blood, and not as much as frequently takes place in those cases in which an abortion occurs through the cervical canal.

In the second form of rupture the site of the injury is either in the superior or lateral wall of the tube. In this form the amount of bleeding is generally greater than that which follows a tubal abortion. This is probably to be explained by the fact that the blood vessels in the tube in these instances are torn through and as a consequence of this injury the bleeding for the time being is more pronounced. Now, in neither of these conditions, as a rule, is any vessel of any special size injured, and the bleeding that takes

place is seldom of an alarming character. It has been found by practical experience that in not more than five per cent of the cases of ruptured ectopic pregnancy are the patients in a condition of marked shock or collapse following this accident. The remaining 95 per cent, as a rule, are in good condition. If the patient is not in a condition of shock it may be assumed that the bleeding has either stopped or else any oozing that is still going on is so slight that it does not produce any systemic effects, and therefore an immediate operation is not called for on account of the continuance of the bleeding. But as regards the five per cent I would ask: Is it a wise procedure on general principles to operate upon a patient who is still in a condition of shock, or who is just recovering from the shock as the result of a ruptured ectopic sac, and thus as it were knock her down again before reaction has thoroughly established itself? Why are these patients in a condition of shock? Some one will answer: "Because they have lost or are still losing blood." As to the question whether or not a patient is still losing blood, I would like to ask how often an operator has really seen an actual bleeding vessel of any size until he began his manipulations in the abdominal cavity.

Let us first consider the factor of hemorrhage in these cases of ruptured ectopic gestation, and later other influences that may have a bearing on the question. Reports seldom state, even in an approximate way, the quantity of blood found in the abdominal cavity of the patient. Some say "a large amount," others "a very large quantity"—terms which convey but little meaning. What we would like to have in these reports would be a fairly accurate estimation of the amount of blood present, and in addition the weight of the patient. We would then be in a far better position to judge to what extent "the previous hemorrhage" was responsible for the fatal issue in many of the cases.

Physiologists tell us that a patient can lose an amount of blood equal to about three per cent of the body weight without fatal results. This would mean that a woman of 130 pounds could lose four pounds of blood without very serious dangers from the hemorrhage *per se*. I question whether so large an amount of blood, or at any rate much more, is found in the average patient of the above weight, as a result of a hemorrhage from a ruptured ectopic gestation. And just here I should like to raise the question whether one can judge of the actual loss of blood to the patient from the amount of bloody fluid present in the abdomen. At least some of it is probably made up of a serous exudate resulting from an

irritation of the peritoneum by the blood that has escaped into the abdominal cavity. In probably every case of ectopic pregnancy there has been a preceding inflammatory condition of the tube, and in consequence of this there is an outpouring of serum into the peritoneal cavity. When the sac ruptures, the peritoneal fluid is at once discolored by even a small amount of blood, and hence this combination of fluids is often mistaken for blood alone. All of us have frequently encountered accumulations of serum free and in peritoneal inclusions, when operating for inflammatory conditions of the lateral structures.

Cases in which the loss of blood in itself would be sufficient to bring about a fatal termination, would seldom be seen in time to save the patient; and it is my firm conviction that in such cases only rarely (possibly never) is a patient actually saved by operation; indeed, at times, she may possibly recover in spite of the operation. Those patients in seemingly marked shock, who recover after an operation, in many instances do so because they are just beginning to react from the condition of shock, as the clotting of the vessel has taken place, and in addition to this procedures are at once instituted for the treatment of the shock by the use of saline infusions and other appropriate measures. Unfortunately in not a few of the reported cases in which the patients were successfully operated upon, the details, from a pathologic standpoint, are not full enough to enable us to judge accurately of the exact condition with reference to the amount of blood present, and also whether or not actual bleeding was going on at the time of the operation.

In support of the statement that many patients have bled to death following the rupture of an ectopic pregnancy, certain statistics are frequently referred to. In these, in certain instances, the amount of blood which was found was enough to fill the abdominal cavity. Such statements, however, are entirely too meagre to give us any definite knowledge, nor can they, I believe, be entirely depended on. I would not, therefore, be willing to accept such statements without a careful analysis of the pathologic findings in each case. The abdominal cavity of many a woman has been filled with blood and yet the woman has survived, and in a given fatal case it must also be proven, that there were no other, and possibly equally important factors in the causation of the fatal result. I need hardly remind you that if a patient were already suffering from some exhausting disease, a slight hemorrhage might produce fatal results and before I can accept the statement that a woman has died

from the hemorrhage alone following a ruptured tubal pregnancy, I must be assured that all the other principal organs in the body were found to be practically normal.

How frequently as a matter of fact is an immediate operation for ruptured tubal pregnancy ever carried out? Certainly in only a very small percentage of the cases, as in most instances it is hours or even days after the accident has taken place before the patient is seen by a surgeon, or before the operation can be performed. Therefore an immediate operation—immediate in so far as the hemorrhage is concerned—must be a rarity. If a woman is going to die from the loss of blood, she will usually lose enough to produce the fatal result long before an operation can be performed. One frequently hears the statement that a patient suffering from a ruptured ectopic gestation died because an operation was not carried out. This may be true in the exceptional cases, but before we can accept this opinion the cause of death must be carefully inquired into along the lines that I have suggested. Moreover, how can one be certain that any given patient would have recovered even if an operation had been carried out? In this connection, as quoted by Simpson, Hartog states that from a complete review of the statistics on this subject in Germany no more than five per cent of the victims of ectopic pregnancy die from hemorrhage at the time of rupture. The operative mortality in cases of ectopic gestation in 1176 cases in twenty-five different clinics was eight per cent.

At this point I would like to briefly mention three cases that came under my observation which go to prove the futility of carrying out an immediate operation before the patient has recovered from the condition of shock following the rupture of the sac.

History—E. H., aged 23, married, was admitted to the Johns Hopkins Hospital, March 20, 1891, complaining of shortness of breath and severe pain in the lower abdomen. One week previous to her admission she had been seized with severe cramps in the abdomen, accompanied by vomiting. She complained of pain all over the abdomen. She had gone about three weeks over the regular time of her menstrual period. Owing to the condition of mental hebetude it was difficult to obtain a satisfactory history.

Examination—Her condition on admission was as follows: Rather anemic; face drawn; temperature between 99 and 101 degrees F.; pulse varying from 96 to 130 beats a minute, small, compressible and regular; respirations from 37 to 42. Lungs negative. Soft systolic murmur heard at pulmonary cartilage. Abdomen sym-

metrically distended, particularly prominent in the middle, tense, tender on pressure, but tenderness not localized. On vaginal examination fluctuation on both sides of the pelvic cavity was communicated to the vaginal finger on palpation of the abdomen. A hypodermic needle introduced through the abdominal wall in the median line, midway between the umbilicus and the symphysis pubis, brought away dark, bloody fluid.

Operation—A diagnosis of a ruptured ectopic pregnancy was made and abdominal section was carried out at once. As soon as the peritoneal cavity was opened a stream of dark fluid blood, about one inch in diameter, spouted seven inches from the incision. As soon as the intra-abdominal pressure was relieved the pulse began to flutter and the respiration to grow shallow. It was evident that she was rapidly sinking. All the fluid blood was at once washed out with six litres (quarts) of sterilized physiologic salt solution. As soon as the uterus was palpated the ruptured right tube was recognized. This ruptured portion was about the size of a three-cent piece, with no visible remains of fetal structures attached to it. The tube and ovary were transfixed and excised. The left side was normal. Owing to the feeble condition of the patient further examination of the abdominal cavity was not attempted, and the abdominal incision was quickly closed, soon after which life became extinct. The whole operation lasted fifteen minutes.

Case II. Seen in consultation with Dr. C. F. Hoover, who had diagnosed a ruptured ectopic pregnancy.

History—H. D., aged 38, married, IV-para, had had one miscarriage at three months, fifteen years previously, youngest child ten years old. Her last menstrual period had occurred nine weeks previously. She said that she had gotten her feet wet at the time of the expected menstrual period, and the same night she had had severe cramps in the lower abdomen with bearing-down, labor-like pains. She had had four similar attacks, each lasting about an hour, the last one having occurred one week before I saw her, following a bath. The menses were due at the time but did not appear. She had also complained of nausea and vomiting, with anorexia for the previous two weeks, with some slight backache.

Examination—On vaginal examination a softish, irregular mass, about the size of the closed fist, could be made out filling up the cul-de-sac. When I first saw the patient the pulse was feeble and rapid, varying between 160 and 170. The skin and mucous membranes were blanched;

the respirations were shallow. She was in such a bad condition that I thought that she would die in a short time. After the use of stimulants and warm external applications the condition began to improve slowly, and after about eighteen hours she was taken to the hospital to be kept under observation. On admission to the hospital, twenty-four hours after I first saw her, the pulse was 130 and the general condition was still improving. On the next day the pulse varied from 104 to 114, and on the third day from 92 to 104; on the fourth day it was 100 and of fairly good volume. The temperature varied between normal and 100 degrees F. The patient was very pale, but she was free from pain, and I considered that I could now perform the operation with safety.

Operation—She was taken to the operating room and ether was administered. As soon as she was under the anesthetic, and placed on the operating table, the pulse increased considerably in rate. She was at once given an infusion of salt solution, and I incised the posterior vaginal fornix, as I felt sure that she would not be able to endure an abdominal section. As soon as the cul-de-sac was opened, several ounces of fluid blood escaped into the vagina. I then washed out the cul-de-sac with a hot saline solution, and packed it with plain sterilized gauze tapes. While this procedure was being carried out the pulse became imperceptible, and the respirations labored. She was hurriedly removed to her bed, but death ensued in spite of all our efforts in about an hour after the operation. The operation, together with the time of anesthesia, consumed thirty minutes.

Patient No. 3. Mrs. G. The last menstrual period began on July 1, 1908, and was very scanty. On September 8, three weeks before being admitted to the hospital, the patient had been obliged to go to bed on account of severe abdominal pains, which caused her to faint. She had had a number of these attacks of fainting, but soon afterwards was able to be up and about until September 27, two days before she was admitted to the hospital, when she had another sharp attack of pain, which recurred at frequent intervals. When I first saw her she had a pulse of about 140 and she looked anemic. On admission to the hospital the leukocytosis was 12,000, and the hemoglobin 38 per cent. The next two days the hemoglobin varied between 38 and 32 per cent, but it did not show any marked fall at any time. The examination of the urine showed a faint trace of albumin with a few hyaline and granular casts. The thick abdomen was slightly distended, and was particularly sensitive in the left lower portion. On bimanual examination the

uterus was found to be enlarged, sagging to some degree in the pelvis, sensitive, but movable. No masses could be detected on either side of the pelvis. There was a slight suggestion of the presence of some free fluid in the cul-de-sac. It was learned that a uterine sound had been passed into the uterus shortly after she had her first fainting attack, with the idea that she had aborted and that there was some mebrane in the uterine cavity which needed to be loosened up. On the day following her admission to the hospital the condition improved considerably. The temperature varied between 99.5 and 100 degrees F. The abdominal pain diminished very much, and the pulse varied from 100 to 110. On the fourth day after admission to the hospital she began to have some distress in the lower abdomen, and there was now a somewhat foul-smelling discharge coming from the vagina. This I took to be evidences of a septic endometritis, and for this reason I advised that the uterus be curetted. The patient was accordingly taken to the operating room and given ether by the drop method. The uterus was curetted and a considerable amount of a thickened and rather foul-smelling endometrium was removed. I then incised the cul-de-sac and while doing this the patient went into a condition of profound collapse from which she did not recover, and died, as we believed, from the shock of the anesthetic alone. In all only 90 cc. of ether were used and the operation lasted only ten minutes and consisted in the curetting of the uterine cavity, and an incision through the posterior vaginal cul-de-sac, allowing possibly two or three drams of a bloody colored fluid to escape.

I consider that these patients died from the shock of the operation which was superadded to the shock which had been produced by the previous rupture of the ectopic sac. All three patients were in fairly good condition, so far as one could tell at the time of the operation, judging from the pulse rate and other indications. In criticising the second case it has been said that the operation lasted too long. I do not believe, however, that this criticism is correct, as the operative procedures were begun just as soon as the patient was sufficiently under the anesthetic. The operation may not have been performed rapidly, judging from the standpoint of time of some operators, but from the work that I have seen the majority of surgeons carry out under these circumstances, I think it may be said that we did the work as rapidly as was consistent with trying to do it properly.

With this class of cases I feel convinced myself that they are more apt to be operated upon too

early than too late, as it takes a considerable amount of courage to hold off long enough even though the general condition of the patient may be improving. Some day we will undoubtedly hear the other side of the story with these cases, and I dare say if a full analysis could be made at the present time it would be found that the number of recoveries following operations upon patients who had been allowed to thoroughly recover from the shock of the primary rupture far exceeds that obtained in the cases of patients who had been subjected to an immediate operation while in a condition of marked shock. As a matter of fact many of the so-called immediate operations are carried out while the patient is recovering from shock and therefore are not true estimates of the danger of the carrying out of operative procedures while the patient is at her worst so far as the shock is concerned.

My objection, therefore, to the carrying out of immediate operations in cases in which a condition of marked shock is present (and by shock I mean when we find a pulse from 140 to 160 or practically imperceptible, air-hunger and other unfavorable indications), is that under these circumstances we are exposing the patient to so great a risk that she frequently will not survive the effects of the anesthetic alone.

My practical experience therefore has been sufficient to impress upon me the importance of waiting until reaction has taken place before carrying out an operation of any sort.

Many authorities who have reported cases of patients that have died as an apparent consequence of carrying out this method of treatment fail to give us the details of the exact condition, and whether or not any treatment at all was carried out to overcome the shock. Where one genuine case can be brought forward to show that the cause of the fatal termination was the loss of blood, I fully believe that I can obtain two cases to show that the cause of the fatal termination was an operation carried out while the patient was in a condition of shock.

To such of my students as are going out into general practice I give the following advice for their guidance in the treatment of cases of ectopic gestation: If the symptoms and general conditions are suggestive call into consultation at once a surgeon with whom you can divide the responsibility. If the surgeon advises the carrying out of radical measures immediately the burden of the responsibility will rest upon his shoulders, and he cannot say that he was called too late. Until, however, you can get some one in consultation, you should try to improve the patient's condition, and this in my experience can

be carried out to best advantage by giving her at once a hypodermic injection of the sulphate of morphine. In the large majority of cases she will soon begin to show signs of improvement. The patient is then kept under observation, and further improvement is brought about by the use of saline infusions under the breast and in some instances, also, of hot saline enemata and the employment of appropriate bandages and weights, since experimental work has shown that these measures appear to favor the cessation of hemorrhage. If the patient is not vomiting or nauseated stimulants in small quantities should be administered by the mouth. External heat should also be applied to the body, and the foot of the bed slightly elevated. Strychnin sulphate may also be used hypodermically in doses of from 1-10 to 1-12 of a grain every half hour or so, according to indications. While this treatment is being carried on preparations are made so that an operation can be performed at a moment's notice. Then as soon as the woman has recovered from the shock of the rupture she should be transported to the hospital, where an operation can be performed at any time when the necessity arises. In this connection I would like to protest against the reckless way in which these patients are hastily and thoughtlessly taken to a hospital for an immediate operation. Such a procedure undoubtedly aggravates the condition of shock, when there had been much loss of blood, and frequently it will start the bleeding afresh by dislodging the clot which has formed at the seat of rupture. Every patient in my series has gradually improved so that after two or three days, and in some instances after twelve days, the operative procedures have been carried out with very little, if any, shock. Do not operate until all signs of shock have disappeared.

The above procedures I have now carried out in 35 cases. I would like to call attention to the condition of five of the patients on admission to the hospital. All of them showed evidences of severe shock, and by this I mean that they were in such a serious condition that death seemed imminent. Every one of them showed considerable improvement in their condition over that when they were first seen, except one whose condition was only slightly improved when she was operated upon the day after admission to the hospital. In these five cases, with the exception of the one case already noted, operation was not considered advisable until the third, sixth, eighth and twelfth day, respectively. None of my 35 patients were operated upon earlier than the day after admission (18 to 24 hours), and there were only three who came to operation so soon. The

remainder were operated upon at periods ranging from three to twelve days after admission, the average being five days, eight of the seventeen being operated upon the third day. In one instance the pulse was above 160 on admission, and on the fourth day it was down to 100; in another case it was 160 on admission and on the third day it was 118; in another, 152 on admission and on the sixth day 100; in another, 148 on admission and on the twelfth day 88; in another, 114 on admission and on the third day 100. The hemoglobin in these five cases varied from 60 to 70 per cent and the amount of blood that was found in the abdomen was estimated at from 500 to 1,000 c. c. (One pint to one quart.)

Now by what means can we tell that bleeding has ceased? I believe it is possible to determine this first by the pulse, but more especially by the hemoglobin percentage examination with the Sahli hemometer. This examination can be made in five minutes' time, and if the hemoglobin percentage does not show any sudden or gradual continuous fall we may take it for granted that the bleeding has ceased in the very large majority of instances. This has been our experience both in dogs and in women, and we have been able to confirm this observation many times in dogs by reopening the abdomen and finding the vessel closed by a clot.

EXPERIMENTS ON DOGS.

We have been conducting a series of experiments on dogs to see if we might not be able to throw some light on this subject from the standpoint of hemorrhage. These, so far, seem to show that, in dogs at least, hemorrhage from large internal vessels ceases before it is sufficient to prove fatal. The operative procedures included excision of the ovary, division of the broad ligament with section of the left uterine vessels, section of the uterine vessels on both sides and other lesions. Not one of these dogs succumbed to the hemorrhage although we probably subjected them to as great a risk of bleeding to death as is incurred by the average woman suffering from a ruptured tubal pregnancy. Incidentally, I may say that one dog upon whom we operated a second time when in a condition of shock died shortly afterwards. The details of these experiments have been given elsewhere.

The experiments may be divided into the following series: (1) Division of the uterine and ovarian vessels; (2) division of the uterine vessels producing shock. Secondary operation on dog in a condition of shock. (3) division of the uterine vessels and observations on the blood

pressure and hemoglobin; (4) division of the uterine vessels and observations on the pulse, respiration and hemoglobin, with special reference to the time of the clotting of the blood; (5) division of the uterine vessels, observations on the pulse, respiration and hemoglobin before and after bandaging and after applying weights to the lower abdomen of the dogs; (6) division of the uterine vessels with the dog in the perpendicular position; observations on the pulse, respiration and hemoglobin.

CONCLUSIONS.

From our clinical and experimental experience we have arrived at the following conclusions:

1. In a woman suffering from a ruptured ectopic pregnancy death is caused mainly by shock, which may be increased by various procedures and especially by operation. The hemorrhage *per se* is rarely, if ever, the sole cause of death.
2. An immediate operation may add shock to shock and so prevent recovery.
3. From an experimental standpoint the hemorrhage ceases in from 15 to 20 minutes. The fact that the hemoglobin remains stationary shows that clotting has taken place.
4. In dogs the subcutaneous injection of salt solution improves the pulse and respiration and does not start the hemorrhage up again.
5. The use of bandages or proper weights by which the anterior and posterior abdominal walls are approximated is likely to improve the condition of these patients.
6. When the diagnosis of ectopic pregnancy is certain, operative measures are indicated; but in most cases the danger is not sufficiently imminent to warrant immediate interference unless the condition of the patient is otherwise satisfactory.
7. Many women not only survive the effects of a tubal abortion or rupture, but also recover even without an operation.
8. Not more than 5 per cent of the victims of ectopic pregnancy die at the time of rupture, whereas after the immediate operation in cases of ectopic gestation in 1176 cases in 25 clinics the mortality was 8 per cent.
9. When a patient is seen in a state of collapse, as the result of a ruptured ectopic sac, she should not be operated on until the condition of shock has been tided over.
10. These patients when they die rarely, if ever, succumb from the loss of blood alone, but mainly from shock. Why then should we superadd to the original shock the additional shock of a major operation, with all the exhausting preliminary procedures?
11. In support of the view that these patients die from shock and not from loss of blood, we have clinical observations of good authorities, and also experiments on animals, the first showing that patients whose abdomens were filled with bloody fluid survived; and the second proving that dogs when exposed to dangers from hemorrhage (sufficiently severe to more than equalize the factor of resistance) do not succumb.
12. In most of these cases, when we operate to ligate a bleeding vessels, no bleeding vessel is found. In some cases the bleeding is undoubtedly started again by the manipulations of the operator.
13. What frequently appears to be a continuing hemorrhage may be produced by a welling up of the blood that was poured out when the sac finally escaped through the fimbriated end of the tube.
14. Some of the reasons for believing that the hemorrhage is not so great as has been generally supposed at the time of the rupture are as follows: (a) The great majority of ectopic sacs rupture between the first and third week of gestation. (b) The point at which the impregnation takes place is in a small area formed by a diverticulum in the tube, and the chorionic villi have only a feeble attachment. (c) From 75 per cent to 78 per cent of the ruptures occur through the fimbriated end of the tube, and are tubal abortions, not more dangerous, so far as hemorrhage is concerned, than those occurring through the cervix. (d) The next most frequent place of rupture is the isthmic portion of the tube, which is also free from any large blood vessels. (e) The point of rupture in the gestation sac practically never involves the ovarian or uterine vessels. (f) As a result of the inflammation which precedes the ectopic gestation, there is a relative increase of the connective tissue in the tube, and owing to the contraction of the connective tissue the vascularity of the tube is limited. (g) The placenta is generally attached to the posterior wall of the tube and as the rupture is generally through the anterior or lateral wall of the tube, the placenta is not lacerated, but retains its firm attachment to the wall of the tube and is subjected to pressure.
15. Physiologists teach that a woman weighing 130 pounds, must probably lose four pounds of blood before succumbing to the effects of the hemorrhage *per se*. So large an amount of blood is rarely found in the abdominal cavity—the sanguinous fluid is a mixture of blood and a serous exudate.
16. The sudden removal of a large quantity of

recently accumulated fluid in the abdomen, before the other vessels have had time to adapt themselves to the altered mechanical conditions, is dangerous and may be followed by fatal syncope.

17. Patients in whom the bleeding would be sufficient to cause death are rarely seen in time to be saved by an operation for ligating the bleeding vessel.

18. Our best operators give a percentage of 40 or 50 per cent as their death rate after immediate operation during shock.

19. The results obtained by not a few good operators who have waited and carried out the deferred operation are certainly worthy of consideration. Their favorable statistics certainly cannot be attributed simply to "blind luck."

20. So long as there is a reasonable evidence that immediate operation may be the wrong procedure, it is our duty to hold our hands and leave something to nature. The medical profession to a large extent has given up the use of dangerous drugs, except when the indications for their use are clear. Should not operators have the same consideration for the lives of their patients?

DISCUSSION.

Henry Wald Bettman, Cincinnati: Mr. Chairman, and Gentlemen—I do not believe this paper ought to be allowed to pass without some discussion, because I think the conclusions drawn are exceedingly important. My early medical education was obtained at a time when the frequency of ectopic gestation was not recognized. Ruptured tubal pregnancy was usually known as pelvic hematocoele; and pelvic hematocoele was generally regarded as a dangerous but not a fatal disease. I remember that in my hospital experience at that time I saw many cases of pelvic hematocoele, and the generally accepted treatment was medical; surgical interference was not considered justifiable as the cases never ended fatally if left alone. All these cases were treated by simple supporting treatment, and they all recovered, which confirms Dr. Robb's conclusions that the affection is per se never or rarely fatal. Therefore, it is very hard to see why these cases should be subjected to any surgical interference at a time when they are under the influence of shock. Of course, the modern tendency is to operate on these patients at once, but Dr. Robb has justly pointed out that operating on all these patients immediately will create a mortality where none should exist. Therefore, I think this paper should have some discussion to impress the truth of its conclusions more generally upon those of us who are internists, but who are generally called upon first to see these cases, and to direct their treatment.

Chairman Hoover: I think this is a very interesting thing that Dr. Robb's paper and Dr. Bettman's discussion have brought out—the unusual circumstance that correct pathological explanation has led to bad therapy, but evidently it has done so in this instance.

W. L. Moss: I would like to ask Dr. Robb, if

as a result of this hemorrhage there are any urinary findings that would throw light upon the diagnosis, such as the occurrence of hematin or urobilin in the urine?

Dr. Robb (closing): First, with reference to Dr. Moss's question, I would say that we have not made any observations along the line he suggests, but that we will endeavor to obtain some data from this standpoint in the future. In reference to the statistics, an analysis of 575 cases of ectopic gestation taken indiscriminately from the literature of the last five years affords some very interesting facts. In these 575 cases an operation was performed within twenty-four hours of the rupture 115 times, with twenty-six deaths, a mortality of 22.6 per cent. An operation was performed after twenty-four hours of rupture in 461 cases, with thirty-one deaths, or a mortality of 6.7 per cent. Seventy-five grave cases with immediate operation gave a mortality of 34.6 per cent; twenty-seven grave cases with deferred operation, no death.

In a series of thirty-five cases that I have reported, there were four deaths, a mortality of about 11.4 per cent. In this series our mortality following the operation, while the patient was in a condition of marked shock, was 100 per cent. The mortality following operations after the patient had thoroughly recovered from the condition of shock was 3.12 per cent.

ABSENCE OF VAGINA, THE EMBRYOLOGY, PATHOGENESIS AND TREATMENT, WITH REPORT OF A CASE.

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[Read before the Ohio State Medical Association.]

Having had a case, recently, of absence of vagina upon which I operated, I was led to review the literature of the subject and to report the case in question, together with a summary of twenty-five records of similar cases reported in this country.

While it may be superfluous to the majority to reiterate the genesis of the female reproductive organs, I feel, in justice to the minority and to fully appreciate what is to follow, that this is absolutely essential.

At about the fifth week of embryonal existence a rudimentary structure develops near the spine at the attachment of the primitive mesentery. This is known as the genito-urinary ridge from which develops the Wolffian body. This structure is composed of a long tube running parallel to the long axis of the body, the Wolffian duct, and a set of tubules joining the former at right-angles at its upper third. It is sufficient to say that these transverse tubules are divided into

three segments, viz., anterior, middle and posterior, the middle segment in conjunction with the upper third of the Wolffian duct forming the parovarium. While these segments play an important part in the formation of the male genital apparatus, the Wolffian body plays no part in the development of the female reproductive organs save those mentioned as forming the parovarium.

A little later than the fifth week there is a thickening on the ventro-mesial aspect of the Wolffian body, which is the genital ridge, destined to become the genital gland, differentiated as the ovary or testicle as the case may be, about the tenth week.

The most important embryonal structures to be noted are the Mullerian ducts. They make *their* appearance a little later than the Wolffian ducts (6-7 week) parallel and a little external to the latter. These ducts are patulous, the lower extremity emptying into the cloaca and the upper into the peritoneal cavity which extremity is destined to become the fimbria of the Fallopian tubes. The superior third of the Mullerian ducts form Fallopian tubes, while there is a fusion of the middle and inferior two thirds to form, respectively, the uterus and vagina. The Mullerian ducts in the formation of the male generative apparatus as the Wolffian in the female are destined to become almost wholly vestigial structures.

Second in importance to the Mullerian ducts in the formation of the female genital organs is the cloaca, from which is developed, in part, the external genitalia. It is a blind dilated pouch of the large bowel at the lower extremity into which empty the genito-urinary ducts (Wolffian, Mullerian, ureters) and intestines. From the exterior the cloaca is defined by a thin membrane, extending anteriorly from the coccyx. This membrane is spoken of as the cloacal membrane in which there is a slight depression called the cloacal fossa. At the anterior extremity of this fossa there develops a small protuberance, the genital eminence, ultimately to become the clitoris. Posterior to the clitoris the depression in the cloacal membrane becomes exaggerated into a cleft. The folds on either side of this cleft form the labia minora and in the embryo are called the inner genital folds or ridges. A few days later two folds develop, the outer genital folds, enclosing the clitoris anteriorly and extending to the anus posteriorly, which, in turn, are to form the labia majora.

During the developmental stage of the external genitalia, which occurs about the seventh or eighth week, two folds develop from the sides of the internal surface of the cloaca to form a

septum. This septum is the basis of the peritoneal body, and divides the cloaca into two compartments, viz., the anterior and posterior, the former is spoken of as the urogenital sinus, the latter becoming the rectum. Suffice to say that the urogenital sinus forms the urethra and vestibule, the components of which we have just mentioned.

Now that the fundamental embryological structures have been mentioned briefly, we are better able to appreciate their malformations.

To recapitulate: Of the Wolffian body only the middle segment of the transverse tubules and the upper third of the Wolffian duct have to do with the formation of the female generative tract; the Mullerian duct forms the tubes with their fimbria, the uterus and vagina and the anterior compartment of the cloaca or urogenital sinus form the components of the vestibule and urethra.

For the sake of simplicity it seems advisable to now review the cases forming the basis of this paper following which the pathogenesis will be more easily understood.

After classifying and condensing the data given in the twenty-five reports of the cases under consideration, I am led to divide them into two groups:

First. Those in which there was absence of subjective symptoms, requiring no immediate radical treatment.

Second. Those cases in which subjective symptoms were present and radical treatment in demand.

In the first group, according to statistics, are placed twelve cases. It is interesting to note the age at which these cases sought the advice of a physician, the majority of the patients having no conception of the exact physical defect. The ages varied between the extremes of seventeen to thirty-four years, average twenty-four years, six of them having entered the realm of matrimony. Symptoms of menstruation were not present in any of the cases, if so not reported. The external genitalia were normal save in one case reported by Coate in which there were rudimentary labia minora and one case reported by Burrage revealing absence of hymen. Five cases showed an enlarged urinary meatus and urethra. Three of these cases were married. One of these, Gooding reports, complained of pain during coitus; in the urethra he could easily pass two fingers and with little difficulty introduce a small Ferguson speculum. The vagina was entirely wanting in all the cases with the exception of two, which showed a slight depression or sulcus. By bi-manual examination the reproductive organs were found in a rudimentary state of de-

velopment or wanting with the exception of Isaac's case in which he found a fibrous band running transversely between the bladder and rectum.

The second group of cases, comprising those of subjective symptoms demanding relief by radical treatment, numbered twelve, exclusive of a case which I will report more in detail.

The ages when this group sought relief varied from fourteen to twenty-six years, with an average of eighteen and one-half years, in contrast to the group of cases previously considered, extremes seventeen to thirty-four, average twenty-four. The difference is obviously due in a measure to the greater degree of development of the genital tract and for our purpose need not be further mentioned.

The symptom complex which characterizes the menstrual molimina was more or less irregular as to duration and severity in accordance with the nature of the case. The duration varied, however, from one month to eight years.

The external genitalia were normal in all but three cases, one in which there was a rudimentary clitoris and attenuated labia majora as reported by Dixon, and DaCosta's and McMurray's cases of absence of hymen. The urethra was enlarged in two cases and Dixon's case of pinpoint urinary meatus, which was not disclosed on inspection, but my manipulation with finger in rectum and hand above pubes the examiner was able to force a drop of urine from the over distended bladder through the opening which was subsequently gradually dilated until a sound could be passed into the bladder. By pelvic examination per rectum there was invariably a mass present, fluctuating, globular, semi-elastic and varying in size from a small fist to that of a pregnant uterus of six months. There is a single exception to this in a case reported by Pallen in which the uterus and adnexæ were undeveloped. The patient frequently complained of epistaxis (vicarious menstruation) associated with pelvic distress and with vertigo. These symptoms had persisted for six years.

There was a trace of vagina in three of the cases. This organ was indicated by a slight indentation in normal location, while in the case reported by Penrose there was a pouch or cul-de-sac. On the anterior wall of this pouch were four fistulous openings permitting the passage of a small probe. From these openings a small quantity of pus exuded.

The one case which I did not classify and promised to report more in detail was reported by Paine. The patient was thirty-five years of age, and this case was in harmony with the others

in this respect, that from external appearance she gave evidence of perfect physical development. She was thought to be in labor and had a midwife in attendance. Being in the second stage of the child-bearing act for several hours, preceding which the membranes had been ruptured, the patient became prostrated from physical effort, which gave no promise of terminating the case, and the attendant requested the calling in of a physician. On making a pelvic examination the index finger passed down over the perineum into the distended anus, which was dilated about three inches in diameter, encountering at once the foetal head. The physicians never having met with such a condition complicating labor, advised counsel with Dr. Paine, who confirmed the diagnosis. Chloroform was administered, Simpson's forceps applied by means of which the child was delivered without difficulty.

PATHOGENESIS.

The following is a summary of associated malformations:

Rudimentary labia minora.....	1
Rudimentary clitoris	1
Absence of hymen.....	3
Vaginal traces	5
Vaginal cul-de-sac	1
Urethra, dilated	8
Urethra, pin point.....	1

Before discussing the pathogenesis of "absence of vagina" and its associated malformations, we should bear in mind one fact which is supported by the analysis of these cases, viz., that the fundamental embryological structures entering into the formation of the female genital tract are distinctly embryonic; by reason of this, there may be a malformation of one part without it necessarily being accompanied by other malformations. We only have to mention, to substantiate this point, that operation in some cases of uncomplicated absence of vagina, is followed by conception, advancing to term and passing through labor without more than the usual complications. By the same process of reasoning we may conclude that there is a functional co-relation between these embryonic structures, one supplementing the other in obtaining a common result.

While it is true that autopsy has revealed very rarely complete absence of vagina, from a clinical point of view our remedial measures would be similar if not identical, differing only in degree. If the uterus and ovaries are sufficiently developed to perform their functions the condition demands radical treatment. If these organs are rudimentary, especially the uterus, painful coition, established through the dilated urethra may be the first symptom complained of.

That absence of the vagina is due to failure of fusion of the lower third of the Mullerian ducts and subsequent atrophy of the intervening septum is a well established fact. Since this is true it is obvious that there may be various malformations of this structure during its development. A fibrous cord, as in the case reported by Isaac, may indicate the situation which should be occupied by the vaginal tube. The septum formed by the fusion of the two ducts may fail to disappear, thus resulting a double vagina; or one of the two canals may be partly obliterated by unilateral arrested development, etc.

According to the data given in these cases, there was an indentation representing the vagina in five cases. Since we believe that the vestibule enters into the formation of the lower extremity of the vagina, we naturally conclude that the depression represents, in part at least, the vestibule of the vagina. In the case reported by Penrose the vagina was apparently normal as to size and length, though there was no sign of os uteri or uterine cervix. The uterus could be palpated by bi-manual examination. It was about three times the normal size. Abdominal section was performed, revealing entire absence of peritoneum. The loops of intestines were attached to each other and to the abdominal wall by loose connective tissue.

While the morphology of the tubes, uterus and vagina are homologous, clinically and for our purpose they are distinct. Anomalies of one are usually associated with some deviation from the normal of one or both of the other structures.

It is only necessary to mention that the uterus is subject to many anomalies very similar indeed to those of the vagina, and since we understand the embryological formation we can readily appreciate how it may be variously malformed.

Since we know that the external genitalia are the offsprings, so to speak, of the urogenital sinus, we may mention the anomalies of such, as a class, emphasizing some of the points still in dispute.

The derivation of the hymen is still disputed by embryologists. Some claim that it is developed from the lower end of the vagina, but Burrage wisely points out "that many cases of absence of vagina and uterus, with a well formed hymen, would seem to disprove this view." Again, he asserts "that the absence of smooth muscle fibers in the hymen would tend to show its anatomical dissimilarity to the vagina." These cases, to my mind, strengthen the belief that the hymen is developed from the urogenital sinus and not from the vagina. Thus, in the three cases of absence of hymen reported above, two were asso-

ciated with anomalies of parts known to be developed from the urogenital sinus. One had a large and dilated urethra, the other malformed labia.

There has also been some difference of opinion as to the cause of the enlarged urethra which accompanies so many of these cases. It may be due to gradual dilation by coitus or to embryological defect of the urogenital sinus.

It is true we know that coition may take place via the urethra, but we are just as positive in our belief that there are cases with enlarged urethra accompanying absence of vagina on which there has been no coition. In Dixon's case there was a pin point urethra, as related in detail in our report of cases. From our knowledge of the development of the urethra and of the numerous cases of the anomaly reported, we may ask why is it not reasonable to maintain that the urogenital sinus may be imperfectly developed so as to produce either an enlarged or pin point urethra?

TREATMENT.

Methods of operation are to be considered from two points of view, viz, curative, by forming a new vagina, and palliative, when plastic fails, by performing a hysterectomy. The latter may be necessary, but is mutilating.

The patient, who has been anesthetized, is placed in the lithotomy position. The bowels having been flushed and the bladder emptied, followed by scrubbing of the shaved region, a steel catheter is placed in urethra and bladder to serve as a guide, and the index finger of left hand is introduced into the rectum. A transverse incision of varying length is made in the region of the normally situated vagina. The septum between the bladder and rectum is now separated by blunt dissection as far as necessary to reach the retained menses. The depth of this separation may vary from two and one-half inches to five inches. As a rule, the trocar has been used to puncture the tumor mass. Every precaution is exercised to avoid a vesical or rectal puncture. After the canal is made of sufficient size and connected with the blind pouch, the cavity is emptied and irrigated with salt solution. The canal is lined usually by transplanting flaps derived from the nymphae or labia majora. There are usually large nymphae or labia majora from which to get the flaps. The flaps should be large enough, if possible, to entirely line the new canal. The posterior flap can usually be obtained from the space in front of the rectum. The flaps should be attached to each other and to the end of the pouch above by chromic catgut suture. When the necessary flaps cannot be gotten from the labia to

cover all the defect, then we may get the grafts from a cystocele of another patient. Dr. Kelly says that the only complete cures which he has known were accomplished by the latter method. There should be a hollow tube left in for drainage and also to keep the flaps or grafts pressed gently against the raw surface which they are to cover.

A. Fletcher did the first operation for the establishment of an artificial vagina in 1831. Since that time operative measures have been varied, and indeed some have been very poorly devised, the latter when surgery was in its infancy.

Of the twenty-four cases which I classified, surgical intervention was instituted in twenty-two cases, with two deaths. The case reported by Curtis died; the cause of death was not stated. The other case, according to Routh, died seven days subsequent to operation, with symptoms of internal hemorrhage.

To secure the new vagina the operative procedures have been similar, with few exceptions. Instead of making the usual transverse incision at the site of the normally situated vagina, Beck made a supra-pubic transverse incision, as in cystotomy, keeping in close proximity to the pubic arch and cautiously avoiding the peritoneum. He dissected between the vesical and rectal walls, guided by an over-distended bladder and a catheter therein. After the dissection had gone so far that a grooved director pushed downward into the wound could be felt from the vulva, the protruding point was cut upon laterally and the dissection was completed from below. Hicks made no attempt at forming a new vagina, but made a puncture per rectum through the rectal septum and allowed the accumulated menses to escape. Special indications necessitated celiotomy in two cases—one reported by Penrose, to which due reference has been made, and Currier's case in which rectal puncture and an attempt at the formation of an artificial vagina had previously been tried. In this case the vagina contracted and menses reaccumulated. This condition, in conjunction with the bicornate uterus, induced Currier to remove the adnexa. Isaac used skin grafts taken from the thigh to cover the raw surface of the canal, and this was followed by little tendency to contract. Burrage did a plastic operation, which netted him an excellent result. In order to cover the raw surface formed by the dissection, flaps were secured as follows: The nymphae were incised at their attachment on their internal aspect, and, splitting or unfolding them, they formed the lateral flaps. The third flap was taken from the fourchette and perineum. The three flaps were attached to the

apex of the new vagina, their edges approximated and stitched only, leaving a patch one cc. square to remain uncovered. The vagina was kept packed with iodoform gauze. The patient left the hospital and was instructed to wear a dilator for one month.

Baldwin reports a new and interesting procedure in the lining of the new canal. He seized the ileum and drew it down through the new canal; then cut across the gut, but preserved the mesenteric attachment to maintain the blood supply. He then closed one end of the gut and attached the other end to the peritoneum at the cervical attachment. The anastomosis between the ends of the ileum was made with a Murphy button.

This made a double vagina. The septum between the two canals was cut through six weeks after the operation, which converted the double vagina into a single commodious one.

REPORT OF CASE.

Miss S., aged 13, very tall and slender for her age, infantile facies, tongue-tied, speech could scarcely be understood, Hutchinson's teeth were positive evidence of her hereditary condition. Her right eye was defective, the upper lid being attached to the ball; she had defective hearing from birth. With all of these infirmities she seemed to be happy and mentally bright in a child-like way. She was the twin of a brother who is living and who, at a glance, seems normal, save a motor defect in one forearm and hand. The girl had severe cramp-like pelvic pains, June, 1908, with attacks during three or four months following of less severity, when she again had an agonizing pain similar to the first in June. Her doctor attempted to make a digital examination when he discovered she had no vaginal inlet. She was brought to me and she was anesthetized and we found by inspection that there was not even a depression to indicate the vagina. The hymen was absent, the labia majora were rudimentary, the labia minora were large. By bi-manual examination with finger in rectum I was able to feel a mass the size of an orange above which the uterus was palpable. The vagina seemed to be wanting for about two inches. We advised operation and sent her to a hospital for that purpose.

OPERATION.

She was etherized and put in lithotomy position, bowels flushed, the vulvar region thoroughly scrubbed and bladder emptied through steel catheter which was allowed to remain as guide, and gloved index finger of left hand inserted in rectum. A transverse incision was made between the rectum and urethra at the junction of the skin

and mucous surface. We separated the vesical and rectal wall by blunt dissection until in close proximity of the mass which was then punctured. By further dilation about twelve ounces of very dark semi-fluid content were evacuated. We then washed out the cavity and grasped the end of the pouch and drew it down to within one inch of the outside. Two large flaps were made from the large nymphae and a third one from the fourchette and perineum and were attached to the upper part of the vagina with chromic catgut. This lined the canal completely. A drainage tube, covered with gauze, and rubber dam was inserted and retained by suture. The patient did very nicely for ten days, when she developed a temperature and increased frequency of pulse. She gradually grew worse with positive symptoms of sepsis. Dulness by percussion and a palpable tumor was present in the right lower pelvic region. A large quantity of pus with a strong fecal odor was drained by an incision made through the right rectus muscle. The drainage continued to be free for several weeks. It was thought at first that it was an appendiceal abscess but later developments led me to believe that the tube was distended with blood when operated upon, and that it had subsequently become infected probably by the douche. These cases should not be douched without some special indication. The average douche given even by trained nurses, as was done in this case, is as likely to promote infection as it is to prevent it.

I examined the patient recently, five months after the operation, and found the new vagina patulous and admitting the index finger. She is improving in health and has menstruated recently without excessive pain.

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DISCUSSION.

Dr. Hall, Cincinnati: We ought to thank the doctor for his very elaborate paper upon this interesting subject. It is a condition that fortunately we are rarely called upon to treat. It occasionally occurs, however, and then we are faced with a proposition that is embarrassing

both to the patient, her friends and the surgeon. The discussion is necessarily limited to the cases that have no vagina, and my personal management of those cases has been very limited, as you will soon know from the statements I make. I purposely omit anything in the discussion as to the treatment of no cases of the vagina. The literature has been reviewed by the doctor and is very exact and precise. I have encountered three cases of total absence of the vagina, and those were cases coming under the head of not requiring any operation. The uterus and ovaries were not developed, nothing to carry on the function of menstruation; therefore no menstrual fluid in the abdomen and not requiring operation. And I think this is where we must draw the line or differentiate very carefully, whether or not we will advise operative interference. The cases perhaps could be better illustrated by a very short narration of each case.

The first case I encountered was that of a woman about thirty-four years of age, who had known of her physical defect since she was a young woman. Her family were well-to-do country people; she had educated herself for a school teacher. At the time she consulted me she was county principal in the state, and she had an offer of marriage, and she said she had no intention of marrying until she consulted a doctor, and she came to the city to consult a specialist. She even did not know her defect. Physically she appeared a perfect woman; her breasts were developed, and ocular examination could demonstrate nothing wrong with the woman. But there was scarcely a point of entrance of the vagina. She had never had any symptoms of menstruation, she had no sexual feeling or desire, and when I explained matters to her she promptly turned down the proposal. She is still a school teacher and is holding her job. That has been about ten years ago.

Another case, which is not so pleasant for her friends and surroundings, was referred to me about six years ago by a doctor in Mississippi. This was a young woman, at that time seventeen years of age. She had been raised a refined girl, and at seventeen had an offer of marriage, and, thinking her husband could make a living for her, she married. In five weeks afterwards she was referred to me; her husband was a man that had a position paying \$3.00 a day—a nice young fellow, twenty-six years of age. And she had no vagina; and sexual intercourse, which they had partly consummated, was made through the urethral anatomy. I could easily put two fingers into her bladder. A careful examination of this patient under an anesthetic showed no rudimentary uterus, except on one side a small lump the size of the index finger, about an inch long. It was not well developed; she had no more breasts than a man, and the vulva was not well developed. She had never had any symptoms of menstruation. Within three or four months after that time she and her husband separated, and she is living in this city now. Up to the present time there is no development of the upper part of the body like women usually have. She is more like a man. And there have been no symptoms of menstruation, and therefore no attempt was made to secure a vagina.

The third case was seen a year or two ago, and it was very similar in physical aspects to the last case, and she was brought to me at the age of eighteen because she had never menstruated. There was no sign of a vagina in that case.

Now, the establishment of a vagina where it can be done, as made by Dr. Bowers in his case, is a correct way and gets good results, but there are cases where perhaps it would be more difficult. I think the most ingenious operation for the use of establishment of a vagina that has ever been given to the profession is that of Dr. J. F. Baldwin, given a few years ago, but it is a very elaborate and dangerous one. He opens the abdomen, and after dissecting up the parts takes a loop or two loops of the intestine, cuts them off, makes a resection of the intestine and converts it into a vagina by leaving the mesentery intact until the second operation. Dr. Baldwin thinks he gets very excellent results. I tried very hard to get the second case to allow me to make a vagina before she and her husband separated, because he told her at the time that if she would have the operation performed he wouldn't leave her. I tried to get her to submit to the operation of Dr. Baldwin, for I didn't think where there was no sign of vagina it would be likely to leave the vagina from the outside. Yet, I doubt in that case whether the results would have been perfect as in Dr. Baldwin's case. There was an attempt at menstruation and a rudimentary uterus. These cases are interesting, and I think the explanation of the doctor of the defect is correct.

THE DIAGNOSTIC SIGNIFICANCE OF LIVER PALPATION.

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[Paper read at the Sixty-fourth Annual Meeting of the Ohio State Medical Association, at Cincinnati, May 6, 1909.]

The physical examination of the liver receives scant attention in medical literature. As a result, many important facts and methods which should be used in our daily work have been too little emphasized to be generally accepted. Physical examination of the liver to be of value requires experience and skill. I have been frequently impressed by the fact that in routine work physicians examine the liver in a rather haphazard fashion and without a very definite idea of how to utilize the data which they obtain. A short paper on the diagnostic significance of liver palpation may therefore not be amiss.

PHYSICAL EXAMINATION OF THE LIVER.

Palpation is the method par excellence of studying the size, consistency and form of the liver. By percussion we rarely learn anything of

clinical value. Only exceptionally can any important facts be elicited by mapping out the upper border. Even the absence of liver dullness in perforation of the abdominal hollow organs has more theoretic than practical value. Enlargements of the liver can more readily be recognized by palpation than by percussion, because the liver following the path of least resistance enlarges downwards instead of upwards. Under ordinary circumstances the diaphragm offers a firm resistance to upward encroachments. In cases of carcinoma of the transverse colon or hepatic flexure and in certain cases of tuberculosis of the omentum, a transverse hard mass in the upper part of the abdomen may be mistaken for the lower border of the liver. Usually these masses do not show the same degree of respiratory mobility as the liver, and sometimes a tympanitic strip separates them from the liver. In acute yellow atrophy the rapidly diminishing liver dullness is of diagnostic importance. In prolapse of the liver the upper border of liver dullness is lower than normal. These three conditions which are all rare, furnish the few instances in which percussion of the liver yields data which are diagnostically important.

PALPATION OF THE LIVER.

The patient should lie almost flat. The head may be slightly raised. Even slight elevation of the thorax is inadvisable as it puts the rectus muscles on the stretch. Palpation with the patient in the half sitting posture is entirely misleading. It is often advisable to have the patient flex the right thigh on the pelvis. Palpation with the patient standing with the body bent forward is rarely satisfactory. Under ordinary circumstances the normal liver cannot be felt by the palpating fingers. In thin walled people the lower border can sometimes be made out in the median line one or two fingers breadth below the ensiform cartilage. Occasionally also the lower border of the normal right lobe can be left just to the right of the rectus muscle. The normal liver is not tender to the amount of pressure which can be exerted under these circumstances.

Palpation of the liver may be performed in two ways which can be classified as (1) superficial (or palpation during inspiration), and (2) deep (or bi-manual or palpation during expiration). In either case the physician sits or stands on the patient's right side.

1. Superficial palpation with the right hand laid flat and gently on the abdomen is the best method to determine uniform enlargements of the right lobe, as in cases of passive congestion, fatty degeneration, hypertrophic cirrhosis. In this method

the palpating fingers detect the enlargement *during inspiration*. During inspiration the left hand can be profitably employed in pushing forward the liver from behind. A delicate sense of touch in the right hand is essential to success in this form of palpation. Firm pressure or digging into the abdominal wall with the finger tips leads to a certain contraction of the rectus muscles and renders an accurate observation impossible.

2. Deep palpation (or bi-manual palpation) is useful in searching for the gallbladder and in detecting irregular enlargements (such as Riedel's lobe). The method employed resembles that used in examining the right kidney. The fingers of the right hand should not be placed too far in the loin. The act of palpation is performed *during expiration*. Pressure must be firm and deep, though never with the tips of the fingers. Without extensive experience in this method one is easily misled by the right kidney. Even the experienced examiner cannot always distinguish with certainty the right kidney from an irregular enlargement or Riedel's lobe.

The most common causes of enlargement of the liver are heart disease (myocardial insufficiency) and cholecystitis. Both conditions are frequently overlooked in daily practice. When the right heart dilates, the liver necessarily becomes passively congested. Passive congestion of the liver is usually associated with certain local symptoms which are often erroneously ascribed to disease of the stomach or liver. There are certain reasons for this.

THE PASSIVELY CONGESTED LIVER IS OFTEN SPON-

TANEOUSLY PAINFUL AND USUALLY MARKEDLY TENDER TO PRESSURE.

This tenderness is often extreme and it is not rare to meet patients in this condition who have been mistakably treated for gall stones or gastric ulcer. In cases of venous stasis the liver usually enlarges uniformly and the lower border is usually round and smooth, but this is by no means always the case. In women especially, the healthy liver is subject to various deformities. When a deformed liver becomes passively congested it often presents marked irregularity of outline, roughness of the surface, and local tenderness so marked that a diagnosis of hepatic cancer is difficult to exclude. Error can be avoided only by a detection of the underlying cause and by the result of appropriate treatment. Very often especially in elderly patients the underlying cause is a myocarditis or myocardial degeneration without valvular disease and in these cases a mistake in diagnosis is especially easy. In most cases of venous stasis there are various gastric

symptoms. Patients feel bloated after eating, there is a desire to eructate gas, and the appetite is impaired. These symptoms increase the tendency to error.

The chief aid to diagnosis in all of these conditions is a proper therapy. The liver when not seriously diseased is a most responsive organ. When patients are put to bed and measures to increase cardiac efficiency are instituted the hepatic tenderness rapidly diminishes, the swelling subsides or disappears and the symptoms of venous stasis are relieved. After that, the liver becomes a good barometer to the condition of the heart muscle, swelling or subsiding as the latter is either relaxed or toned up to the normal.

CHOLECYSTITIS WITH OR WITHOUT CHOLELITHIASIS
IS PROBABLY THE MOST COMMON CAUSE OF EN-
LARGEMENT OF THE LIVER.

The enlargement in these cases is limited to that part of the liver which lies near the gallbladder. At first, the enlargement is due to active hyperemia occasioned by the acute or subacute inflammation of the gallbladder. Later on the liver becomes locally enlarged and deformed either through frequent repetition of the active hyperemia or because of the mechanical tugging of the stone-filled bladder. When the deformed portion appears as a tongue-shaped elongation of the right lobe it is called a Riedel's lobe. Riedel's lobe is usually associated with gall stones, but this is by no means always the case. We are justified in ascribing a Riedel's lobe to gall stones when there has been a history of colicky pain, when the lobe is tender to pressure *and when manipulation of the lobe causes pain in the epigastrium*. Billings has called special attention to this latter feature. Very often the leading or only symptom of gall stones is epigastric pressure (Magen druck). When manipulation of any accessible portion of the right lobe of the liver causes a reappearance of the epigastric pressure (Magen druck), thus simulating the spontaneous symptom, the diagnosis of gall stones becomes probable, but by no means absolute. I have seen this sign repeatedly in the absence of gall stones.

It is not generally recognized that acute attacks of cholecystitis are sometimes accompanied by a most extraordinary swelling of the right lobe of the liver. The swelling may extend down to the umbilicus, and may not subside entirely for several weeks. In severe cases the contraction of the right rectus muscle may cause us to overestimate the size of the underlying tumor, but after the acute inflammation has subsided we are enabled day by day to note the gradual reduction

in size of the swollen right lobe which has been tender, rather hard and not fluctuating.

For several years I have been impressed by the curious fact that an accurate knowledge of pathology has in one instance at least exercised a confusing effect on diagnosis. I have reference to cancer of the liver. We know that from the standpoint of pathology, cancer of the liver is not usually a primary disease. *Now, from the standpoint of the clinician, cancer of the liver is very frequently a primary disease.* By this I mean that cancer of the abdominal or pelvic organs often remains unrecognized or latent until secondary deposits occur in the liver and the first intimation of serious disease arises from enlargement of the right lobe of the liver. On several occasions I have seen the attending physicians unwilling to accept a diagnosis of cancer of the liver because of the obstinate pathologic fact that primary cancer of the liver is rare. An early symptom of cancer of the liver in many cases is diarrhea. Cachexia often progresses slowly, but nearly always steadily. A continuous loss of weight in patients over fifty years of age, associated with pallor and an enlarging right lobe of the liver is very suspicious of carcinoma. In a fairly large proportion of cases jaundice is absent. Moderate leucocytosis is the rule and the evening temperature is apt to be one or two degrees above the normal.

A carcinomatous liver is almost invariably sensitive to pressure and usually spontaneously painful. Later on, the original focus of the cancer is often recognizable. In the later stages the surface of the liver is very hard and nodular. When jaundice occurs the diagnosis is simplified. The jaundice does not fluctuate, but grows constantly more intense. If the gallbladder is involved, palpation almost always reveals an irregular nodular and very hard mass in the region of the gallbladder. A previous history of gall stone attacks is then usually obtainable.

A few words may be added regarding cirrhosis of the liver and syphilis of the liver.

The diagnosis of alcoholic cirrhosis is usually not difficult. When only a moderate quantity of ascitic fluid is present, it is very easy to overestimate the size of the liver and the spleen. The intestines float on the fluid and at least in the standing posture the bulging in the upper half of the abdomen is misleadingly large. It is easy to be misled into the belief that the cirrhosis is of the hypertrophic form, whereas an operation or autopsy reveals a contracted liver. Tapping renders a more accurate diagnosis possible.

Syphilis of the liver is not a common clinical disease. Gummata may cause an irregular nodu-

lar enlargement of the right lobe. Jaundice and ascites are usually absent. There is no progressive emaciation. The swollen liver is usually painful and tender. The pain may be worse at night. When the gummata break down a septic type of fever may be present. Other signs of syphilis should be looked for. In doubtful cases the therapeutic test with iodides and mercury may be necessary. The iodides should be given in large doses and for several weeks before being deemed ineffectual. Gummata are sometimes recognized during the course of an abdominal operation.

DISCUSSION.

George A. Fackler, Cincinnati: I will endeavor to earn your praise by the brevity of my remarks. We may eliminate from the discussion cases in which the enlargement of the liver is associated with such striking changes in the consistency, contour or other features of the organ, or cases in which associated symptoms in other parts of the organism render a diagnosis easy. Perhaps the manifestations are so clearly referable to but two or three diseases of the liver that we may be called upon to differentiate only between this number.

The essayist's method of examination of the liver to detect possible enlargement requires no comment. The cases of hepatic enlargement, which appeal to me chiefly under the title of the paper, are those in which it is a difficult matter to draw a dividing line between health and disease. Passive congestion of the liver secondary to chronic cardiac or pulmonary disease, creates an enlargement the cause of which rarely escapes the observation of the careful clinician. I am confident that in quite a large number of cases which come to the attention of the general practitioner the enlargement of the liver is due to active congestion.

This may be simply an expression of an exaggerated physiological process that occurs during digestion. The normal circulation may be disturbed and congestion unduly prolonged or exaggerated by excessive eating or drinking, by the use of irritating food or alcohol. Sedentary life, lack of exercise furthermore compromises the freedom of hepatic circulation. Various poisons, endogenous or exogenous, carried to the liver by the portal vein may provoke acute congestion. Toxins of various infectious diseases may reach the organ by way of the general circulation and thus produce the same deleterious effect.

Because these factors are also the causes of inflammation and degeneration, it is a difficult matter to differentiate between congestion and such processes. It may be justly assumed that in many cases the resulting changes in the liver are mere gradations of the same process, which, depending upon the severity and virulence of the operating cause, in the one case ceases at the congestion and subsides, and in the other progresses to slight headache to mental depression.

Without changes so gross as to leave no or little doubt as to the pathological changes in the liver structure, these cases of active congestion tax our diagnostic ingenuity. I would emphasize,

however, the class in which the enlargement is due to errors in diet and lack of exercise. Anorexia, coated tongue, epigastric distress, nausea and vomiting, discomfort and pain in the liver region, constipation, may be the accompaniments on the part of the digestive apparatus. Symptoms on the part of the nervous system may vary from slight headache to mental depression.

To regard hepatic enlargement with such associated symptoms as indicative of anatomical changes in the liver and probably irremediable is a grave error, since prompt and lasting relief is afforded in many instances by appropriate therapeutic and hygienic treatment.

Chairman Hoover: Is there any further discussion? If not, I will ask Dr. Bettman a question in reference to a point which was called to my attention some years ago, not by my experience of it, but from an article in medical literature. I cannot now recall who was the author of it, but it referred to the hepatic enlargement which occurs in patients who have an arteriosclerosis. They have high arterial pressure, and there seems to be absolutely no evidence which would justify our suspecting the large liver to be due to veno-stenosis; yet these patients have large livers. Upon giving them nitrites and lowering the blood pressure the volume of the liver will diminish in size. It does not seem that the enlargement of the liver associated with arterial sclerosis and high blood pressure, nor the diminution of the liver in size after the administration of nitrites can be simply a manifestation of disturbance in the mass movement of the blood. It looks as though it must be due to a local modification of the hepatic circulation, or of the hepatic artery alone.

Henry Wald Bettman: I regret I am not able to throw any light on this class of cases. My impression has been that we have in these cases some increased resistance in the venous system which may not show itself in the more peripheral veins, but is manifest in the liver. The liver is more intimately associated with the right heart than any other organ. In a number of cases of arterio-sclerosis we have a certain amount of fatty degeneration in the liver which keeps it large. In a certain number of these cases the structural conditions do not improve under the administration of nitrites or iodides. I do not know if arterio-sclerosis often affects the intrahepatic branches of the hepatic artery. As Dr. Hoover suggests that might be a very good subject for pathological study.

MIND AND MEDICINE.

J. S. RARDIN, M. D.,
Portsmouth.

[Read before the Ohio State Medical Association.]

There has been renewed activity recently in the field of psychic therapeutics. The journals, both lay and medical, have devoted a great deal of space to the subject. Many books have been written on its various phases by different authors. This increased study is the result of the propaga-

tion of a number of cults within recent years, all of more or less popularity and following. Christian Science, the New Thought, Mental Culture and more recently the Emmanuel Movement, originating in that cultured seat of learning, all have more or less to do with the healing art, and pretend to cure disease by influencing the mind.

These cults have had sufficient following to cause no little diversion from orthodox medicine. Is it not well then that we inquire of ourselves if we have been improving our opportunities? We are led to believe that the psychical factor in treatment has been neglected by the profession.

That there is a close affinity between mental and physical phenomena all must admit. We must also admit that there is a thread of truth running through the fabric of these new cults, but they have been so permeated with rank charlatanism and commercialism as to offend the senses of rational thinking people.

They have presented nothing new but have re-introduced old ideas.

Some two thousand years ago Plato put these words into the mouth of Socrates: "Even so there is no cure for the body apart from the soul; and the reason why so many diseases elude the physicians of Greece is that they know nothing of the soul, which ought to be their chief care, since if this be not sound it is impossible for any part to be well. For all things both bad and good not only in the body, but in every part of the man, have their starting point in the soul, whence they overflow in the same way as from the head into the eyes. First then and above all the soul must be treated if the head and the rest of the body are ever to be made whole; and the cure of the soul is brought about by means of certain charms, which charms are good words. By these words temperance is begotten in the soul; and this once begotten and abiding there, it is easy to supply health to the head and the rest of the body. Let no one persuade you to treat him for headache with this medicine until he has first yielded up to you his soul to be treated by the charm, for just here the mistake is made in regard to men. They attempt to treat the body independently of the soul."

In the place of soul read mind in the above quotation and you have a very clear conception of modern psychotherapy. Its principles are just as true today as then.

The belief that disease was a manifestation of evil spirits was until recently, world wide and is still prevalent over a large portion of the world's population. Demonology was everywhere prevalent and is yet in many places. There was never a savage people but had their charmers,

sorcerers and voodoo men. The incantations of the American Indian furnishes us a fitting example of this manner of treatment.

It has not been very many years since people in this enlightened land were burned at the stake because they were believed to be possessed of witches. It might be worth mention in this connection that in the last prosecution for witchcraft in this country, Mother Eddy of one of these cults, was the prosecuting witness.

During the time of Paracelsus the doctrine of magnetism attracted a great deal of attention.

Toward the close of the eighteenth century, Mesmer promulgated his theories of animal magnetism or mesmerism. This was taken up by the charlatans of the day who prostituted it for gain and it fell into hopeless disrepute.

Nearly a century later, Braid of Manchester, revived the study of Mesmer and gave us hypnotism, from which the modern scientific study of the subject began.

The investigation has been carried further by Liebault, Bernheim, Charcot and more recently DuBois. Under these able men the phenomena of hypnotism has been advanced to a more respectable position. Whatever its value, which has been in dispute, there is no doubt but that a knowledge of hypnotism has greatly advanced the scientific study of psychology.

Liebault gave us the theories of suggestion, a valuable therapeutic agent.

It is only within the last quarter of a century that psychology has been scientifically studied in its relation to medicine. Its further study by men now giving it their sole attention can hardly fail to add to our knowledge of mental phenomena.

Dr. Tuke, in his work, "Influence of the Mind on the Body," was the first to give the subject respectable presentation, and arouse professional interest of its importance.

The profession has been very conservative because of the uncertainty hitherto surrounding occult phenomena and the charlatanism connected thereto.

Further study of psychology will do much in clearing up these dark corners.

The modern theory of the cellular construction of matter conceives that the final analysis of matter is the cell. That all cells have been endowed with a something which, for want of a better term, we call energy, the various qualities of which give to each individual cell its personality and characterize its functions.

From a grouping of these energized cells, organic life developed. In the processes of evolu-

tion the various cells have taken on new forms and functions.

Haeckel tells us that half the ages passed before any traces of a nervous system was found. It was the outgrowth of the necessities of a protective agency.

Each cell is an individual entity and performs all the functions of animal life in itself, including nutrition, digestion, excretion, decline and death, to be replaced by others. This building up and tearing down of cells is life itself.

The nervous cell or neuron comprehends the highest functions of energy and is of the highest order. The proper grouping of these constitute the nervous system, which belongs to all animal life.

The nervous system is made up of various chains of cells beginning in distant parts of the body, collected together into afferent bundles constituting the sympathetic system, which finally terminates in the brain, the great central plant of energy, the store house of mind.

From this central organ efferent bundles are distributed to the distant parts constituting the cerebro-spinal system.

The sympathetic system presides over all the silent forces or involuntary actions, the subjective functions, whilst the cerebro-spinal controls the voluntary or objective functions.

The brain is the master control of the entire organism. In it the highest conception of cellular energy is evolved which constitutes mind or soul.

Mental functions fall into two classes, the conscious and the subconscious. Probably all were originally conscious but some of these functions have been in operation so long and so uninterruptedly that the mind has ceased to take cognizance of them and they have become automatic and are called the subconscious functions. Such are the processes of secretion, assimilation, nutrition and the like. Anything which retards or in any manner alters these subconscious functions interferes with the life giving processes and predisposes to disease.

It is in nervous disorders that mental treatment has its most valuable field of usefulness. The neuroses, psychasthenia, neurasthenia, hysteria, melancholia, hypochondria, mania and the like.

There are certain characteristics common to all these disorders, irritability, indecision, instability of the mind, defective or lapsed memory, lack of self control, exhaustion, despondency, fear and so on.

They constitute a class of cases that make the patient most miserable indeed and life hardly

worth the living. Sufficient importance has not been given this class of cases in the past.

The trend of modern civilization is to an increase of nervous disorders. Rapid transit, fierce competition in business, supremacy of great corporations, manipulation of intricate machinery, intense artificial light, all engross the nervous system, impairing its stability.

Worry is a common complaint and a constant accompaniment of nervous disorders.

The use of alcoholic drinks plays an important part in causing nervousness. The nervous system is the first to respond to the baneful influence of the poison. A person once thoroughly intoxicated suffers nervous and mental changes that are never obliterated.

Veneral diseases are a fruitful source of nervous disorders. Both the mental and physical effects are far reaching. Moral obliquity predisposes. The man or woman leading the double life is in constant fear of detection and falls a victim to nervous breakdown.

Heredity is an important factor in the increase of nervous disorders. Not only are sensitive nervous systems transmitted but the subsequent environment of the offspring fosters nervous weakness.

We know that diseases are being relieved and cured by means other than physical with the same underlying principle used by the sorcerer and voodoo man.

We have failed to consider many nervous disorders as disease and they have been accordingly neglected and passed from the legitimate practitioner to the hands of the quack and charlatan.

The pilgrimages to the shrines and temples of healing and to natural springs of little or no therapeutic merit, the stacks of discarded crutches left by their predecessors, inspire the new pilgrim with hope and benefit or cure follows.

Whatever our special field of work, there is legitimate use for rational mind treatment. The successful physician will always hold in keen appreciation the mental attitude of his patient.

Suggestion is the basis of psychic treatment. The patient must be re-educated and the disordered mind directed in healthy channels. Suggestion acts through the conscious mind upon the unconscious. Every dose of medicine we give is more or less a suggestion and sometimes the more valuable part of the dose. The placebo is just as legitimate and at times more effective than potent remedies for it inspires hope and contentment of mind without which the subconscious functions do not properly act. Happiness and hope are twin sisters that always work for good.

Hypnotism is an induced sleep, an artificial separation of the mind from consciousness, a subconscious condition, which receives suggestions and the patient brought more directly under the control of the operator. The subconscious functions may thus be stimulated by healthy suggestions. The mind taught to think in healthy channels. Its use, however, should be restricted to men of character.

In the absolute confidence of our patient we hold the key to successful treatment and without that confidence our medicine loses much of its potency.

A careful physical examination inspires confidence thereby acting as healthy suggestion. Our every word and act should be directed to inspire hope and confidence. The patient must be taught obedience to every order. It should be our endeavor to banish bad thoughts and delusions and replace them with healthy ideas.

Amusement, diversion, healthy physical exercise, all tend to set the mind at ease. Congenial occupation and companionship should not be overlooked.

Persuasion should be used. Plain, simple reasoning thereby convincing him that his troubles are not real or at least so serious as he thinks, will often succeed.

Auto-suggestion should be practiced. Convince him and then have him constantly bear before his mind his error. His subconscious functions will assume a healthier tone.

The more complete your authority over the patient the better it will be for him.

The tendency of the modern cults is to combine religion and medicine. I think we should be very careful about such an alliance.

The preacher or priest inspired with due importance of his calling may render most valuable service. Tactful words of council and prayer, in times of despair will often sooth a nervous wakeful patient into sweetest sleep, from which he awakes refreshed and inspired with new hope.

DISCUSSION.

J. W. Clemmer, Columbus: Mr. President, and Members of the Section: I find that it is rather embarrassing to undertake the discussion of a subject so ultra-scientific. I learn from the paper that progress is being made on the meta-physical plane the same as on the physical plane. When I was a boy in college all text-books on mental philosophy divided mental faculties into three classes, the intellect, the sensibilities and the will. Under the new psychology there are two classes which are variously called objective and subjective, conscious and subconscious. Hudson classifies the faculties into the objective mind and the subjective mind, declaring these to be distinct entities. It may not be pleasing to attempt

a division of our mental faculties; we are rather adverse to having our consciousness disturbed. The objective mind is conscious, while the subjective mind, as the name indicates, is unconscious; the objective mind is not conscious of the subconscious. But the classification and the theory work out in facts whether we quite agree with the proposition or not.

The duality of mind doctrine is necessary to explain the wonderful powers of subconsciousness, including psychotherapy. The old text-books did not teach anything respecting the wonderful powers of the subconscious mind. They did not explain the nature of dreams, somnambulism, catalepsy, dual personality and other subjective states.

Time limit will not permit details. Only a brief summary of the objective and subjective classifications, according to the new psychology is attempted. The objective mind represents man in his normal state, reasoning both by induction and deduction. The subjective mind reasons only by deduction rendering it subject to the law of suggestion; it has a perfect memory; it has intuitive powers; it perceives without the use of the physical senses; it has control of the organic functions and presides over the sensibilities. It is under control of the objective mind. When, for any reason, this control is lost, the individual enters the subjective state as illustrated by mediumship, hypnosis, somnambulism, etc. It is observed that the activities of the subjective faculties, whether under control of the objective mind, that is, under normal conditions, or not under such control, that is under abnormal conditions, are always regulated according to the law of suggestion. It is repeated that the organic functions are under control of the subjective faculties. Respiration, circulation, etc., are carried on by the subjective mind that never sleeps, while the objective mind is in a state of repose. Since the subjective mind regulates the organic functions and is itself amenable to suggestion, the logical deduction follows that suggestive therapy or mental healing is based upon psychological laws. Upon this foundation psychotherapy must rest.

Dr. Galloway, Xenia: In connection with the timely and excellent consideration of this subject by Dr. Rardin I wish to give the experience of the Greene County Medical Society the past winter, in making a consecutive study of this question. The society has within its membership a number of gentlemen who are much interested in the problems of medicine and who like subjects that admit of some speculation as well as of investigation. The retiring president, last November took up the subject of psychotherapy in general, and more especially with reference to phases suggested by the Emmanuel Movement. Upon his recommendation four meetings were devoted to a study of the questions; of the subconscious mind and its operation; the conscious mind and its operation; the psychical forces in medicine; finishing with a lecture by Dr. Zenner of this city, upon the general operation of the psychical forces upon neurotics. After a study of these divisions, we felt that we would have a firmer foundation for practical work if we could hear Prof. James, of Harvard, or Prof. Hyslop, or some teacher who has had the benefit of the operation of psychological laboratory research, to round up

our course of study and give us a practical working basis on which to apply the operation of these laws, which seems to be newly rejuvenated, for of course the general subject is a very old one, as Dr. Rardin has well said. We felt if we could get instruction, based upon tangible and operable laws that we would complete a most profitable and pleasing course of study.

The society is divided in its final view of the matter; some taking the general view that hypnotism in some form is the basis of present psychological therapeutics, differentiating the personality of the physician, his character, knowledge and medical capability, from the so-called psycho-therapy demonstration.

Others hold the view that the subject occupies a wider field, but they desire further information if it can be obtained.

This series of papers before the Greene County Medical Society is mentioned in connection with Dr. Rardin's paper and Dr. Clemmer's discussion, to show that this question can profitably take a concrete form in societies, and to call forth some effort from the members of this section of the State Association to make a more systematic investigation of the question.

Chairman Hoover: Is there any further discussion of Dr. Rardin's paper? If not, I will ask Dr. Rardin to conclude the discussion.

J. S. Rardin (closing): Mr. Chairman, my remarks will be very brief. I had hoped that this paper might stimulate a renewed interest and a practical application of the work in the every day life of the physician. I believe that the reason why this subject has fallen largely into the hands of bad people is that the regular profession has neglected these forces and failed to improve fully the opportunities which are open to its use every day.

Reference has been made to the Emmanuel Movement, which, I can readily see, might enlist the interest of such distinguished men as Dr. McCosh and Dr. Worcester, men who are eminent in psychology; but when that movement takes the form of a wave sweeping through the community and is participated in by many unqualified people who would make an alliance with the medical profession, then I think we should be extremely careful with whom we are allying ourselves. Many men of the religious profession have studied this question in connection with psychology, and these men can be most useful to us. I believe that the time often occurs in our practice when we can cooperate with the patient's pastor or priest getting their friendly counsel, and perhaps consultation with relatives will accomplish good results. I had an experience recently with a patient with neurasthenia. I had a little conference with the priest who looked after my patient, and I noticed that the advice given through him had a great influence on the patient, and she was benefited by it. I want to thank you most cordially for the reception given my paper.

A METHOD OF OPENING THE MASTOID ANTRUM THROUGH THE EXTERNAL AUDITORY MEATUS AS THE FIRST STEP IN THE MASTOID OPERATION.

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[Read before the Ohio State Medical Association.]

The mastoid antrum constitutes the key to all mastoid operations. The uncapping of this cavity is among the first endeavors of the operator, no matter what method is employed. The two chief types of operation follow either the classic method of Schwartze¹, working from the cortex toward the antrum; or the method of Stacke², beginning within the tympanum and working outward. Macewen's³ modification of the first step of the Schwartze operation consists in drilling a shaft parallel to the posterior superior meatal wall, beginning in the supramental triangle and terminating in the antrum. Zaufal⁴ recommends the removal of the posterior wall at the same time that the funnelshaped opening is being made in the cortex. Another route to the antrum was suggested by Von Troeltsch⁵ as early as 1869. Noting from his clinical and postmortem studies that pus in the antral cavity frequently perforated through the postero-superior meatal wall, he suggested the advisability of at times opening the antrum at this point, rather than through the cortex. Wolf⁶ advised a similar operation which he practised on the cadaver chiseling away concentric layers of the posterior wall until the antrum lay exposed. For the performance of this operation he considered the drill a more dangerous instrument than the chisel. Eysell⁷ was probably the first to carry out this operation upon the living. Quite recently Heath⁸ has employed a similar technique, removing the meatal wall with a chisel, until the antrum is exposed and then enlarging the opening with an electric drill. Without making an external incision, Sturm⁹ has succeeded in reaching the antrum from within the tympanic cavity, employing a small burr for this purpose. He limits this procedure to cases with a wide meatus.

OPENING THE ANTRUM DIRECTLY FROM THE AUDITORY MEATUS.

The method which I wish to propose, as the first step in the mastoid operation, consists in

making a drill opening directly into the antrum through the posterior superior wall of the meatus. The procedure is based on the following anatomical, pathological and surgical grounds. The antrum is the most constant of all the mastoid cells. According to the researches of Held¹⁰ it was present in all the 643 skulls he examined. The antrum lies immediately above and behind the meatus and is separated from the auditory canal

according to Politzer¹¹ may often extend outward half the length of the meatus, although when very small it is only to be found in the neighborhood of the annulus tympanicus. As a rule the antrum can usually be found opposite a point corresponding to the junction of the inner and middle thirds of the posterior bony wall. (Fig. II.) The middle fossa of the skull is usually found above the level of the meatus, and a



Fig. 1. Adult temporal bone showing a congenital (?) defect* in the postero-superior meatal wall (II). This defect leads into the antrum. I—Membrana tympani. (Drawing by Dr. L. Tedesche.)

by a thin partition of bone between three and four millimeters in thickness. ($\frac{1}{8}$ to $\frac{1}{6}$ in.—Wolf. Op. Cit.) Occasionally a defect is found in this partition throwing the antrum and meatus into direct communication. Fig. 1 is an example of such a case which I found on the postmortem table. The antrum never lies deeper than the length of the posterior wall (Held. Op. Cit.), and

forward lying sinus is always external to the antrum.

According to Randall¹² the facial nerve descends vertically from a point a few millimeters behind the posterior pole of the ear drum, so that it comes into relation only with the posterior inferior wall of the meatus.

The sinking in of the meatus from above and

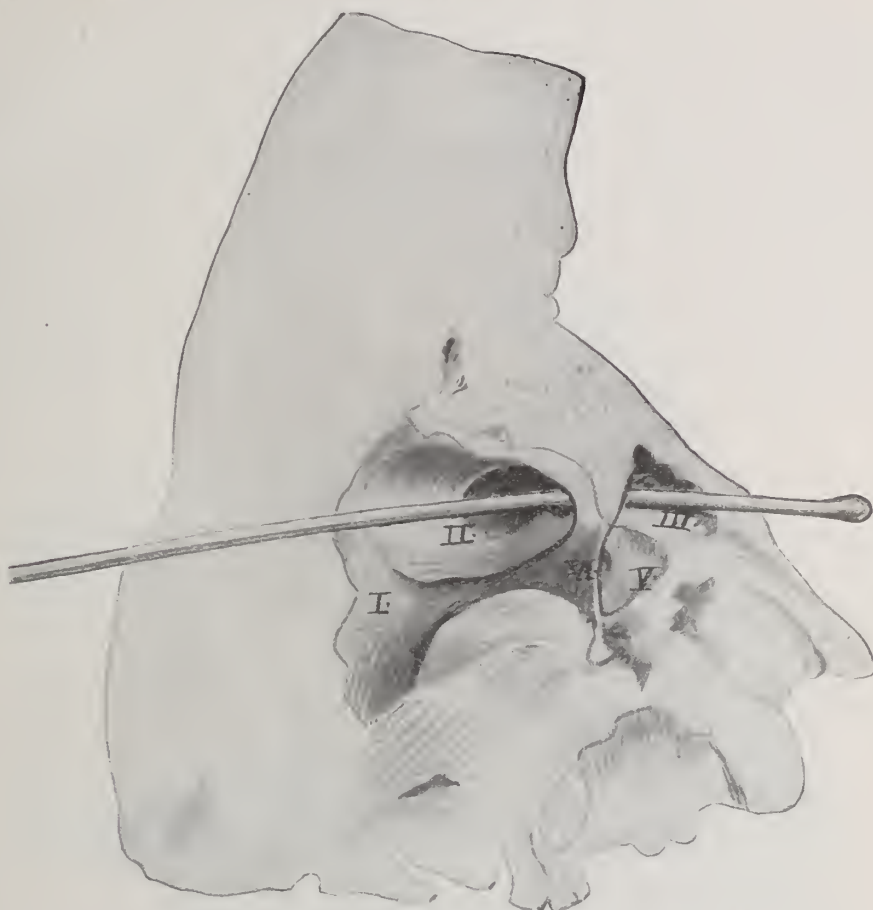


Fig. 2. Vertical section through the external auditory meatus, viewed from before showing the anatomy of the parts involved in the operation.

- I. Meatal floor.
- II. Posterior meatal wall with burr-opening leading directly into the antrum (III).
- V. Cavum tympani.
- VI. Remains of membrana tympani.

behind is almost pathognomonic of mastoid disease and fistulae occasionally form at this point.

The direction of the posterior superior wall is the surest guide to the antrum, so that a drill opening here follows the general rule laid down for uncapping of this cavity. In the surgery of this region, the electric burr possesses the following advantages. It does not tend to slip, will push aside rather than penetrate the dura (Barr¹³, Macewen¹⁴ and Lombard¹⁵), and if rotated too near the facial nerve, the vibrations will stimulate the nerve before endangering its integrity. (Politzer. *Op. Cit.*) (See also case VI.) Hemorrhage and concussion are diminished by its use, and bone necrosis can be prevented by cooling the drill in water.

Having found by numerous experiments on the temporal bone that the antrum may be readily, safely and rapidly opened from the antrum, I have developed the following technique.

TECHNIQUE.

The usual curvilinear incision is made just behind the auricle and the soft parts are separated from the posterior superior wall and held forward by a slender retractor, exposing the annulus tympanicus. A bit of gauze or cotton is placed in contact with the drum in order to protect the tympanum. Under good illumination a large olive-shaped side-cutting burr (Fig. III) is introduced into the bony meatus to a point corresponding to the junction of the inner and middle third of the postero-superior wall; that is, the distal extremity of the burr is about a quarter of an inch (5 m. m.) from the annulus. The side of the burr (driven with a $\frac{1}{8}$ H. P. Victor motor) is held



Fig. 3. Burrs (actual size) used in the operation.

in contact with the bone at this point and the meatus is enlarged in a backward and slightly upward direction until the antrum is opened. (Fig. IV and Fig. V.) A bent probe is now introduced into the cavity which is explored in every direction. The opening is now enlarged with the burr or curette until the antrum is fully exposed. The burr must be removed from time to time and

vening between the antrum and meatus, but these lead directly into the antral cavity. If the antrum be very small and deeply situated, it may become necessary to cautiously extend the drill canal medialward with the point of the burr. Such cases may require as much as fifteen minutes. (Case VII.)

With the antrum in full view, the succeeding



Fig. 4. Temporal bone. Section inclined slightly upward and backward from horizontal plane. The burr is seen entering the antrum through the postero-superior wall of the meatus.

- I. Posterior meatal wall.
- II. Antrum.
- III. Aditus ad antrum.
- IV. Articulation of malleus and incus.

cooled in water, while the probe is repeatedly inserted to explore the cavity. By this method the antrum is usually uncapped in a very few minutes. In two cases (No. II and VI) it required less than two minutes to enter the antrum.

Occasionally some small cells are found inter-

steps in the operation consist in enlarging the drill canal in a backward, downward and outward direction until the remainder of the posterior wall and the mastoid cortex have been removed. This may be done either with a burr or chisel; more rapidly with the latter. In case the

radical operation is to be done, the bridge of bone external to the aditus may now be removed with the drill. While the removal of the posterior wall is an essential part of the radical operation, the external portion of this wall may also be advantageously taken away in the simple operation, since the soft parts of the cartilaginous and membranous meatus will granulate much more rapidly than the bone and will thus hasten the healing process. This was first pointed out by Macewen and has recently been advocated by Plummer, Germain¹⁶ and Hopkins¹⁷.

I have performed the operation described above

several years standing. Operation: Ethylchloride ether anesthesia. To prevent hemorrhage, adrenalin was injected along the posterior superior wall. Incision in the usual line, the membranous meatus retracted downward and forward exposing the drum. Small cotton plug placed in contact with the drum for protection. The burr was introduced to within a quarter of an inch of the posterior superior margin of the annulus. The bony meatus was extended in an upward and backward direction, by drilling a gutter; and then by sinking the gutter toward the median line, the antrum was uncovered. This



Fig. 5. Looking into the external auditory meatus and showing burr-opening made directly through the postero-superior wall into the antrum. D—Membrana tympani.

upon seven cases, which I shall now briefly report. In all of these cases the mastoid region was radiographed before the operation, so that the anatomical and pathological conditions were in a large measure determined prior to operative intervention. Concerning this phase of the subject a separate report will be found elsewhere.

REPORT OF CASES.

Case I. M. S., male, aged 12. Diagnosis: Chronic suppurative otitis media on the right, of

part of the operation required seven minutes. Operation canal extended backward and downward with the chisel. Dura exposed in the middle fossa. The bridge external to the aditus was thinned down, exposing the short process of the incus, which was not disturbed. The meato-mastoid operation was then completed with Panse flaps.

Case II. A. Z., male, teacher, aged 56. Diagnosis: Tuberculosis of the left middle ear and mastoid. Operation: Soft parts retracted down-

ward and forward. Meatus was enlarged in an upward and backward direction with a large side-cutting burr. The antrum was the first cell opened and was exposed in less than two minutes. Radical operation completed with chisel, curette and burr. Complete recovery.

Case III. H. N., male, teamster, aged 62. Diagnosis: Chronic otorrhea with mastoiditis on the left side. Operation: The antrum was opened by the meatal route with an electric drill. This required about three minutes. Antral cavity proved to be very large and was practically the only cell found. The cortex over the antrum was about a half inch thick. Operation continued with chisel and burr, and operation completed with Panse flaps.

Case IV. F. M., male, aged 2½. Diagnosis: Acute suppurative otitis media with mastoiditis on the left. Operation: Modified simple operation with removal of posterior canal wall. Drill was introduced into the meatus which was enlarged in an upward, backward and then downward direction. The antrum was then found and its outer wall removed with curette. The greater portion of the operation was completed with the burr. The membranous meatus was then restored to its natural position.

Case V. J. R., male, laborer, aged 21. Diagnosis: Chronic otorrhea with mastoiditis on the right side. After the usual incision back of the auricle, the membranous meatus was drawn downward and forward. Large electric burr applied to posterior superior wall, which was first extended in an upward and backward direction. Bone of ivory hardness. Owing to the depth of the antrum, the operation canal was enlarged medialward by cutting with the point of the drill. The mastoid antrum and a few adjoining cells were thus opened after ten minutes drilling. A few drops of thick pus in the cells. Operation extended backward and somewhat upward with the chisel, curette and burr. The bridge external to the aditus was thinned with burr, thus completing a meato-mastoid operation. Panse flap and skin flap from back of ear.

Case VI. M. P., male, cabinet maker. Diagnosis: Chronic otorrhea with mastoiditis on left side, complicated with pyemia. Operation: Incision and retraction of the soft parts. Pus welled up from the middle ear. With the burr a large cavity was opened almost immediately; that is, in less than a minute. Probe proved it to be the antrum very much enlarged in every direction. Cortex removed with chisel and forceps. Cavity contained pus, granulations and pyogenic membrane. Dura covered with granulations in

the sinus region. Dura uncovered in the middle fossa and found to be normal. Radical operation completed with the burr. Twitching of the face while drilling in the outer attic region; no paralysis followed. Skin flap from back of ear; Panse plastic. Incision closed back of ear.

Case VII. Female, aged 21, housewife. Diagnosis: Chronic suppuration in both ears of several years' standing. Operation: Drill operation on left ear, meatus enlarged upward and backward with side-cutting drill. Bone of ivory hardness. Necessary to drill with point in order to reach the deep seated antrum of very small dimensions. Antrum exposed in fifteen minutes. Forward lying sinus exposed without injury. Radical operation completed with chisel and burr. Flap operation as in case VI.

CONCLUSIONS.

As a result of the experience gained from experiments on the temporal bone and the cases reported above, the following advantages may be claimed for the operation of opening the antrum through the meatus as the initial step in the mastoid operation.

(1) The procedure is justified on anatomic grounds, since the anterior inferior wall of the antrum is very thin, and no important structure intervene between the meatus and the antrum.

(2) The antrum may be readily and rapidly opened through the meatus, no matter what its depth from the surface, and the burr is kept in full view throughout the operation.

(3) The exposure of the antral cavity early in the operation gives valuable information concerning the condition of the mastoid bone.

(4) With the antrum fully exposed to view the remaining steps of the mastoid operation are much simplified.

(5) In cases complicated with a forward-lying sinus, it often becomes imperative to work from within outward, and the direct method through the meatus does away with the necessity of introducing instruments into the middle ear, a procedure not unattended with danger.

(6) In cases in which the simple operation has been performed, the healing process may be hastened if a portion of the posterior bony meatus is removed at the time of operation. (Macewen, Plummer, Hopkins.)

(7) The electric burr is a safe instrument in mastoid surgery, since it is not apt to penetrate the dura mater and stimulates the facial nerve before endangering its integrity.

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PRIZE FOR CONSUMPTION CURE.

Announcement is made that an anonymous alumnus of Yale has offered a prize of \$100,000 to the person who first discovers an adequate remedy for tuberculosis. The fund has been placed in the custody of Yale University and the medical school faculty are to act as its trustees. An advisory board has been appointed, whose membership includes E. L. Trudeau, of Saranac, Lake; Simon Flexner, of the Rockefeller Institute; William H. Welch, of Johns Hopkins University; Lawrence F. Flick, of Philadelphia, and Hermann M. Biggs, of New York. The income from the fund is to be used for the investigation of any remedies which come to the attention of the trustees or members of the advisory board that have not been submitted for the prize. A condition of the award is that the cure under consideration shall have been in use for at least five years and during that time have proved its actual and unquestioned efficiency.

THE RECTAL COLONIC TUBE: ITS USES AND ABUSES.

BY U. S. GRANT DEATON, M. D., A. B., M. S.,
Toledo.

[Read before the Ohio State Medical Association.]

The importance of the rectal tube can only be circumscribed by the field wherein it is used. To ascertain what this field is is one of the objects of this paper. To know how to use the rectal tube is another object of this paper. To know when to use it is also to know when not to use it. This paper resolves itself analytically into the field of diseases that can be treated with the rectal tube, the how to use and when to use it.

It is the writer's opinion it can be used with great benefit in treating the following diseases: 1, Colitis; 2, dysentery; 3, appendicitis; 4, typhilitis; 5, sigmoiditis; 6, proctitis; 7, periproctitis; 8, ulceration, when eight inches or more above the anus; 9, recto-sigmo-colonic parasites.

The time allotted to his paper precludes a discussion of the above diseases separately.

In treating colitis, dysentery, appendicitis, typhilitis and ulceration of the colon, it is imperative that the tube be introduced high enough that the upper end of the tube rests at the point where the lesion or disease exists.

To introduce the tube properly requires careful and delicate manipulation and is accomplished as follows: The tube should be 60 inches in length, made from the best Para rubber, and when not in use should be kept coiled, for this one thing will be an important factor in its introduction; the patient may be placed in the genupectoral, dorso-sacral, or Simi's posture; the tube should be lubricated with vaseline, only at the end to be introduced; more vaseline may be placed at the anus to lubricate the tube as it is introduced. Pass the introducing end of the tube through the anus, the greater curvature of the tube toward the right buttock, by gently pushing up and withdrawing the tube the lower plica will be passed, then turn the tube on its axis as it were to the right 120 degrees or the third of a circle and manipulate the tube by pushing up gently and withdrawing the end of the tube a half inch, if resistance is met; repeat until the second plica is passed, then turn the tube on its axis to the right another 120 degrees, manipulate until the third plica is passed, and so continue until the end of the tube passes into the sigmoid flexure; if it is desired to pass the tube as far as the caecum,

* Note.—For convenience the term "Rectal" tube has been used instead of "Recto-Colonic" tube.

push the tube up (or forward) until it meets resistance, and without stopping the forward and upward pressure, turn the tube to the right 180 degrees or half way around on its axis and the tube will enter the lower end of the descending colon; push the tube up and forward rapidly and it will enter the transverse colon without turning the tube on its axis; continue to push the tube forward into the ascending colon until the end of the tube reaches the caecum.

In introducing the tube there are several points to be borne in mind. When resistance is met and the tube will not advance, withdraw the tube about a half inch and try to advance it again. If you fail again to advance the tube, repeat the manipulation, and while doing so twist the tube to the right on its axis, being careful not to twist too much, which would cause the tube to "buckle" or "pinch twist," thereby cutting off the caliber of the tube. If, after repeated trials, you fail to advance the tube, connect the nozzle of the irrigator, which should be suspended eight or ten feet above, with the end of the rectal tube and proceed with the same manipulations as before. The force of the water will stiffen the tube and distend the rectal walls, or gut, as the case may be. When the tube will advance push it forward rapidly until the desired point is reached.

Should the tube "kink," "buckle" or "pinch twist" while introducing it, it must be withdrawn until the "kink," "buckle" or "pinch twist" is relieved, which can be ascertained by observing the water in the irrigator and noting the unobstructed flow of water through the tube.

Forcing the tube forward when it meets with an obstruction must not be attempted. Such rashness will kink the tube and excite peristaltic action of the bowel and rectum; also, might injure the wall of the gut.

Should the rectum be irritable and resent the presence of the tube or its introduction, wash out the rectum with a one-tenth of 1 per cent. solution of eucaine. A better plan is to insert an opium suppository above the internal sphincter and eight or ten hours before the time to introduce the tube.

The rectum and colon should be emptied with a saline, followed by an enema of sodium bicarbonate before introduction of the tube, if the time can be spared in preparing the patient.

In treating amoebic dysentery and colitis strong solutions of silver nitrate, bichloride of mercury, carbolic acid, etc., should never be used in the rectum or colon.

Weak solutions of silver nit. and bichloride should be followed for several days with solutions of hydrastis, Gaultheria, eucalyptus, bap-

tisia, calendula, pinus canadensis or mentha arvensis. Caustic solutions should not be repeated too often, six to ten days being frequent enough, and should be followed in turn by the mild solutions already mentioned. No fixed rule can be followed, but the cycle of time composing the rotation from the use of the silver solution, followed by the mild and healing solutions to a return to the silver solution will vary from six to ten days, depending on the condition and improvement of the case, a good index of which is the decrease or increase of mucus or pus.

You will be disappointed if you expect to cure a case of colitis in a few weeks.

In the treatment of appendicitis and typhlitis after the caecum has been washed and siphoned out and no mucus or pus is seen an aqueous solution of lysol, or carbolic acid, six to ten fluid ounces in quantity, should be deposited in the caecum through the tube and left three or four hours, the rectal tube being left in position with the end clamped to prevent the escape of the solution. The head and shoulders of the patient should be kept elevated above the hips to keep the solution in immediate contact with the diseased area. After the lapse of a few hours, if you have watched your patient carefully, and it is an acute case, you will know if there is any improvement in the patient's condition. If there is no change for the worse, or there is improvement, siphon out the solution and accumulated fecal matter and deposit another solution which can be drawn off in a few hours. If the patient has made improvement, deposit in the caecum through the tube.

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Ol Eucalypti aa dr viii
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The tube may be withdrawn or left in place if it does not disturb or distress the patient. Within the next six hours there will be a decided improvement in the patient's condition, provided the appendix has not ruptured or the caliber of the vermiform appendage next to its attachment to the caecum has not been occluded, imprisoning pus at the distal end of the appendage. Such conditions would unmistakably point to surgical interference at once.

If the patient shows improvement by the "Direct method," the treatment should be kept up until all tenderness and fever have subsided, which will not be a long time, usually two or three days.

If the rectal tube was sterilized before using, no harm can result from leaving it in place for twenty-four hours, or even longer if necessary.

The essayist does not take the position that this direct method or manner of treatment for appendicitis supplant operations for this disease. No, no! There are conditions existing at times when this direct method can not be used or applied. If the rectum or colon, perhaps both, were loaded with faecal matter and could not be removed, or a ruptured appendix, or again the rectum might be hyper-sensitive and would not admit of the intrusion of the tube, it would be folly to cling to any particular method and bar out a surgical operation.

In cases of chronic appendicitis the rectal tube, if used properly, will cure a large per cent. of the cases. Up to present date the writer has treated five cases of chronic appendicitis, all of which are entirely cured, i. e., patients have been entirely free from distress and tenderness in the appendiceal region.

The writer has only treated two cases of acute appendicitis. One was entirely relieved in twelve hours and out of bed and attending to his business in two days. The other case was one day longer in recovering from the attack and getting back to his business.

Gentlemen, the facts though few, have been presented for your consideration, judgment and criticism. The thought of its being more sensible, practicable and efficient is the only apology of the writer in presenting it before this assemblage of doctors today.

DISCUSSION.

B. Merrill Ricketts, Cincinnati: I do not think we should allow a paper of this kind to go unchallenged. This tube was originated by Dr. Langdon some twenty years ago, and was first known as the Langdon tube. It was made in three and five foot sizes at that time and of black rubber. E. R. Wood was the first to use the longer tubes.

I have never had any assurance that I ever entered the descending colon with this tube, but probably got into the sigmoid a number of times with the tube twisted upon itself. The doctor speaks of turning it upon its axis 180 degrees; I have not tried this experiment here, but if that tube is stretched out its entire length, and I make a half turn at this point (illustrating) it does not affect the curve at the other end at all. I have turned the tube at this end in a complete circle, and the other end has not been affected at all; what will it do where there is resistance? I have turned that over twice and yet the end of this tube has not changed its position. It looks to me like the statement was made in an honest way, and I believe the doctor believes what he says, but it seems to me that it is fallacious. I have made the turn three times and yet the end of this tube has not changed its position on this paper. What, then will it do in the gut?

The question of rectal irrigation is one that is exceedingly interesting. In these cases of tuber-

cular colitis and dysenteric conditions it was first thought that some of the medicaments were effective when irrigation was employed, but it has been found that simple water irrigation is all that is necessary to cure a large per cent of these conditions.

When we come to the question of appendicitis, that is where I think we should not allow this paper to go without much consideration. In the first place appendicitis is a pathological condition; it is diseased tissue. We do not know what the condition is, and nothing but a surgical operation will determine that; nobody but the surgeon in 95 per cent of the cases can determine to a dead certainty that it is appendicitis even when it is appendicitis. We open the abdomen many, many times for appendicitis and find there is none. The doctor says this method is not applicable in certain cases of pathological appendicitis; if we have acute appendicitis, who knows whether it has perforated at that time or whether it has perforated during the last two weeks? I know of a case which was perforated and died within twelve hours of the first attack. There is no way of determining the true condition of the appendix, no way of determining the true condition of the abdominal cavity unless you open the cavity. We open it to see what is the matter, and so in these cases of appendicitis it makes it very uncertain for us to make any statement as to the outcome. So far as temperature is concerned, it amounts to practically nothing. We see the most desperate cases perforate, with the belly full of pus, and they do not have any temperature, while some who have no perforation have a temperature of 104 or 105 degrees, so that I do not consider temperature at all in dealing with appendicitis. Pain in the right lower quadrant, tenderness near McBurney's point, should arouse our suspicions.

I am very glad to have heard the paper, but I doubt whether he has accomplished what he thinks he has, but it seems to me that the doctor's attempt to make these different variations and curves is one without avail; he may get to the ileo-cecal valve, but I do not think the movements he describes are responsible for reaching that point.

Theo. E. Keeler, Lebanon: I would like to ask the essayist to tell us how he knows the point of that tube enters the cecum. I think if it is there, and there is a tender appendix just ready to burst, there would probably be danger of causing rupture, just by the presence of the tube.

Geo. B. Evans, Dayton: We all know how dangerous it is to put a tube of any length into the bowel, and we also know how difficult it is to put in a tube unless it is more or less stiffened, in the rectum, or even the lower portion of the sigmoid, and furthermore we all know that a laceration of the sigmoid or colon may exist without our knowledge, and consequently to introduce a tube of this kind I believe is dangerous surgery from that standpoint. I do not wish to criticise the doctor in regard to what he has accomplished, or thinks he has accomplished, but I have my doubts whether this tube can be put up its full length. I know I have tried, at various times and under most favorable circumstances, to use the double current tube, but I doubt very much whether I ever put Dr. Jelk's tube up full length at any time. A number of times I have

had my assistant and others at the hospital declare they had put it in when treating the case, and I afterwards put my finger up the rectum and hooked up the distal end of it and demonstrated that the tube was curved on itself.

U. S. Grant Deaton (closing): First, I believe I stated that if the bowel and rectum were loaded with feces, you certainly could not introduce a rectal tube. In the next place, I want to state that this very tube has been introduced into twenty-five different people. I also stated that this tube was kept coiled, and that that was the secret that would furnish the means whereby it can be introduced. Now, if you will just remember the anatomy of the rectum, you should have no trouble in introducing it. If you just notice, gentlemen, this tube has a tendency to curve. As to Dr. Ricketts' objection, laying this tube out here and turning it, I cannot see how that would apply. When you first commence to twist only at this point, you would have to twist the tube several times, very likely. However, if you will notice, this is a stomach tube; you cannot introduce the ordinary rectal tube farther than the sigmoid flexure. You can pass farther than this point if you take this tube. Get one and try it; you will be surprised at the result. Turn this curve here toward the right buttock, then after it has passed the first plica you turn that one-third around; it will turn very easily. You must bear in mind to always turn to the right because that conforms to the anatomy of the rectum. If you twist it the other way you can accomplish nothing. If you keep turning to the right one-half the distance, it is not a question of doubt at all—it is simply a question of doing it. This is the third tube I have worn out. For five years I have been introducing the rectal tube; this is not the first time this question of introducing it has been raised. Dr. Jones, of our city, said: "Doctor, I do not doubt your word, but I think it is just simply the doctor himself." I said: "Come down and I will show you," and, gentlemen, if you will find a case I will be glad to show any of you that it can be done.

You cannot do any damage with it if you handle it gently, and in fact if you go to handle it in a rough way it will kink and buckle for you. It will not do any damage unless you jerk it out suddenly. The patient will tell you where it is, and you can feel the vibrations of the water, and when you draw it out you can see the pus coming directly from there. There is no question about it, it is the only way to treat colitis. I have never been able to cure colitis until I used the tube and applied the medicine directly to the diseased area.

Another objection that was raised was that if the disease had progressed to the point where there was a rupture of the appendix, it is not applicable. Some time always elapses from the beginning of the attack until it can be determined whether an operation is necessary, and while you are waiting to see whether this is an operable case or not, use the rectal tube and do all you can for the patient during those five or six hours which pass before you can determine whether it is an operable case or not. You will be surprised to know how quickly the tenderness in typhlitis and colitis will disappear after you have siphoned out the fluid, withdrawn the pus, and applied the antiseptic direct to the part. It is better than all

the internal administration, where a dose of medicine has to go through thirty feet of gut before it gets to the point of tenderness. I believe this to be the only practical method of treatment in these cases.

As I said before, so far as the question of introducing the tube is concerned, it is not a question of whether it can be done, it is a question of doing it. If you do not remember your anatomy and twist the tube in the right direction, you will fall down every time.

I thank the gentlemen for the courtesy extended; I have gotten off more easily than I expected.

OPHTHALMIA NEONATORUM FROM THE STANDPOINT OF THE OBSTETRICIAN.

WM. GILLESPIE, M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

Surgery has been robbed of much of its danger by asepsis and obstetric work is no longer followed by epidemic of child bed fever, because the importance of cleanliness is so generally understood.

The profession is awakening to the fact that the great principle of prevention may and should be extended to gonorrhoeal ophthalmia, and in exact proportion to the thoroughness of the obstetrician's work in this direction, will we have a lessening of this serious and loathsome disease with its resultant blindness and pauperism. I shall not attempt to discuss any of the other aspects of the subject but will confine myself to a consideration of how the infection may be prevented from gaining an entrance to the eyes of the infant. The subject is too large to be fully presented in so short a time and if I fall short on the strictly scientific aspects of it, will try in a measure to compensate by giving practical methods by which the desired result may be in a large measure achieved. The best method of prevention consists in stamping out the infection in the mother before the onset of labor. This is a subject seldom considered, probably because of an unfounded fear of local treatment of the pregnant woman.

It may be laid down as a rule to which there are few exceptions, that any condition which would in the non-pregnant woman demand active treatment, may with safety be treated in the pregnant. The fear of inducing abortion by douches and local applications to the genital tract is, I believe, unfounded so long as such treatments do not invade the uterine cavity—except in rare cases of predisposition to abortion. If the physician is

called to a pregnant woman suffering with gonorrhoea, he may safely pursue the same course of treatment that would be applicable if she were not pregnant, with two exceptions—the internal os must not be invaded and the vagina must not be packed tightly. Not only is the child spared the risks of infection by this course, but the woman's dangers are greatly lessened. Gonorrhoea is never so prone to travel upward as immediately after labor or miscarriage. There are many methods of treatment, but I shall confine myself to such as have been demonstrated by personal experience to be safe and efficient.

After a thorough douching in the recumbent posture, a tampon of ichthyol and glycerine is applied to the cervix at night and removed in the morning, when all secretions are washed away by a lysol douche. The ichthyol seems to have considerable bactericidal power while the glycerine, by stimulating secretions, tends to secure the expulsion of the gonococci from the depths of the glands. The cleansing lysol douche is followed by one to one thousand bichloride. The douches are used twice a day and the labia are alternately pinched round the tube and released, thus securing the ballooning of the vagina and a thorough cleansing of its whole surface.

Twice a week a glass Ferguson speculum is introduced and a solution of silver nitrate twenty grains to the ounce is poured in. The speculum must not be lubricated, as this would protect the mucous membrane from the action of the drug and a rather small size should therefore be selected. As the speculum is slowly withdrawn every portion of the vaginal mucosa is bathed by the solution which is caught in a pus basin held against the perineum. The external parts are sponged with a solution of common salt to neutralize the nitrate.

The vulva is thoroughly cleansed and with a glass medicine dropper a solution of protargol is introduced into the urethra. If the urethra is neglected all your attempts to stamp out the infection may be futile. The same is true of the cervical canal and this may be accomplished by wiping out all secretions with dry cotton and then carrying into the canal a cotton wrapped hard rubber application which is passed through the silver nitrate solution that is bathing the cervix and vaginal vault. If this is done with care there is little danger of injuring the membranes. By such treatment you can usually pretty thoroughly stamp out the infection, in the case of a pregnant woman, in two or three weeks. I have never seen ophthalmia occur in the child when the mother had been thus treated, but would not advise dependence upon this alone, as there are

numerous sources from which the gonococci might be expelled into the genital tract by the labor itself. We may not, however, have time for such thorough work before the onset of labor and be compelled to depend upon such preventive measures as can be employed in the presence of active gonorrhoeal infection.

Douches here also may play a valuable part. While granting the general proposition that the use of the douche is not called for in normal labor, there can be no doubt of its value in cases of active vaginal infection. In a case of gonorrhoea I should use vigorous antiseptic irrigation at the beginning of labor and repeat it at about the beginning of the second stage. The eyes of the child remain within the uterus, in most cases, until the perineum begins to distend. It is the part of wisdom therefore to keep the vagina as clear of secretions as possible during the latter part of the second stage of labor and to hasten it, if need be with instruments, as soon as the eyes begin to approach the uterine orifice.

Hirst says that he has known ulceration of the cornea and blindness to result from the entrance of bichloride of mercury solution during this stage of labor.

If the solution is made before it is placed in the bag, so that no undiscovered particles are present, I think that no danger is to be apprehended from this source. As a special safeguard the strength of the solution may be reduced to one in two thousand.

Such a use of antiseptics not only lessens the chances of infection of the eyes during labor but of the mouth, ears, and genital tract as well. When the child is born the eyes should be immediately wiped with clean gauze and the manner of doing this is important. It is best done by one whose fingers have not been in contact with either child or mother and the wiping should always be towards the nose. Most nurses and many doctors wipe away from the nose and thus assist the secretions to enter the eye. As soon as possible a drop or two of silver nitrate solution should be dropped into each eye and the hands of both nurse and child should be kept away from the eyes and the whole child be thoroughly cleansed as soon as possible. Many an eye is infected by the hand of the infant, or nurse, after the delivery has been safely effected.

Solutions of one, one and one-half and two grains to the ounce are employed. While the stronger solution will frequently produce considerable irritation and discharge, it is also more apt to prevent infection than the milder and should, therefore, be preferred in cases of known or even suspected gonorrhoea.

Danger of infection is not over so long as the hands which attend the child are coming in contact with the secretion of the mother and I am in the habit of insisting that the child should never be touched by the nurse until she has washed them thoroughly and soaked them in an antiseptic solution. I have presented this subject thus far entirely from the standpoint of personal experience, believing that a few practical details for outweigh, in such a campaign of education as this, any amount of theoretical discussion. That these methods are the best I do not claim. They are given simply as the ones with which I am familiar and I have never seen a case of gonorrhoeal ophthalmia develop where I had previous knowledge of gonorrhoeal infection and either of the methods discussed was employed. But the majority of cases of gonorrhoeal ophthalmia occur where the attendant has had no suspicion of the existence of gonorrhoea in the mother. I have made no attempt to study this subject from the standpoint of the bacteriologist, but believe, from clinical experience, that such infection may find its way into the eyes of the child where there have been no suspicious signs on the part of either parent for several years. A probable explanation is found in the enormous secretion from cervical, vaginal and vulvar glands occurring during labor, which liberates from their lurk-places the gonococci. The wide prevalence of gonorrhoea among young men; the frequency of its imperfect cure; the large number of respectable wives who have thus become infected and the impossibility of the attendant ruling out the possibility of infection in the individual case, leaves the subject of prophylaxis in an uncertain state.

If we judge the subject from a statistical standpoint there seems no doubt that gonorrhoeal ophthalmia is of very frequent occurrence in the new born and that every child should be regarded as probably infected. But statistics are taken from large lying-in hospitals and two important sources of error should not be overlooked in attempting to reason from them and formulate rules to govern private practice.

The patients from such institutions come from the stratum of society where gonorrhoea is quite prevalent and where no attempt is made to effect a perfect cure, symptomatic relief being regarded as sufficient. Another possible source of error is suggested by the crowding together of many patients in such institutions.

Ample evidence has in recent years been accumulated to show that vulvo-vaginal gonorrhoea is very common in the children's wards of our hospitals. There can be little doubt that in these cases there is a transmission from child to child

and it is at least probable that the number of cases of gonorrhoeal ophthalmia in lying-in hospitals is out of all proportion to the number of infected mothers.

These differences must not be lost sight of when we attempt to formulate rules to govern our conduct in private practice. Without enthusiasm in our work we will make little progress, if enthusiasm is not controlled by the judicious exercise of the critical faculty we will make false progress, which is worse than none.

My own personal experience, both in country and city practice, will not allow me to believe in the frequency of this disease which is assumed by men who do no obstetrics, and get their information from hospital statistics. If the same methods of investigation were employed to ascertain the prevalence of surgical cases, the impression would prevail that most of the sick people of the land were in the hands of hospital surgeons. The fallacy of such methods needs only to be mentioned to be recognized, and we will be wise if we insist upon the advocates of methods based upon such false premises correcting their data before we, without reserve, accept their conclusions.

The same caution should be used in accepting conclusions as to the prevalence of blindness from this source. It is of little scientific value to ascertain the number of those blind from this cause, unless we go farther and ascertain the percentage of these cases to the total birth rate, for without this information we are little wiser than before. Without some such data it will be unwise to attempt to lay down dicta for the government of all cases of labor. Lacking this definite information, I wish it understood that any conclusions I may give you are presented, as the lawyers say, upon information and belief and that the next batch of information which comes to me may modify those beliefs. It would seem to be wise in hospital practice, whether the suspicion of maternal gonorrhoea exists or not, to use two grains to the ounce of silver nitrate in the eyes immediately after delivery. In all suspicious cases in private practice the same rule should be followed and all cases giving a history of vaginal discharge should, in the interests of safety, be regarded as suspicious. The eyes should in all cases be promptly cleansed, whether a suspicion of gonorrhoea be entertained or not, and a boric acid solution be used regularly in all cases, not only as a safeguard against specific but non-specific ophthalmia.

Of the propriety of using nitrate of silver solution in all cases I am not yet convinced. If used in less strength it is not always successful, while

a two grain to the ounce solution is apt to be followed by an inflammation reaction, sometimes of considerable severity.

Such an inflammatory reaction has never, so far as I know, produced serious damages to the eye and if the probabilities of infection were great, would not deter me from employing it as a routine measure. I am not disposed to do so, however, when my experience in private practice would indicate that only a small fractional percentage of cases will develop gonorrhoeal ophthalmia without it. The other and milder silver salts have not demonstrated their positive efficiency as preventives, and many of those best qualified by experience to judge, believe that the ideal preventive is yet to be discovered.

If anything in the history or symptoms present arouses a suspicion of gonorrhea however, it is safer to risk an inflammatory reaction rather than a specific infection.

DISCUSSION.

D. T. Vail: I want to say a word or two regarding Dr. Gillespie's paper. It is particularly valuable, as it comes from a general practitioner, and we like to hear the views of others as well as to have views of our own. The accoucheur stands in close relation to the subject of ophthalmia neonatorum, and his opinion is valuable. We have profited greatly by the essayist's opinions on the subject and should offer him a vote of thanks.

There are a few points in regard to the paper, however, which occurred to me while he was reading. These seem to me to be fair and reasonable, and I rise to offer them for what they are worth. The first is this: I would regard it as the duty of the accoucheur in a case of suspected vaginal gonorrhea, just before the time of expectancy to secure a small amount of pus from the vagina and subject it to a microscopical examination. If it should be found to be a genuine case of gonorrhea, he should immediately tell the father of the expected child, or perhaps the mother, that there is a dangerous disease present in the vagina and that the child's eyes may be infected, and that to prevent disaster to the eyes, an oculist should be summoned at the time of birth that the eyes may be treated by him and the responsibility taken away from the family doctor. The oculist should, of course, receive a fee for his work, but if the parents are too poor to pay, it should be a labor of love and the service rendered as a matter of duty.

There are, however, no doubt many cases in which this plan is not feasible, and in that case the accoucheur should be equipped with the necessary paraphernalia to treat the child's eyes properly at time of birth. This is not a very complicated affair. He should at the moment of birth take a piece of cotton and wipe from the eyelids the moisture which has accumulated there, then use a cotton wad moistened in bichloride solution in the same way after which he may drop in the eyes a one per cent solution of nitrate of silver and apply some vaseline ointment to the inside of the conjunctival sac. He should then put a patch of cotton over the eyes held

by an adhesive strap until the child is washed, after which the patch could be removed and the eyelids again washed. By following this plan there would be little or no likelihood of infection occurring.

HOSPITAL STAFF ELECTED.

At a special meeting of the board of directors of the Cincinnati Hospital, the following staff was elected for the ensuing year:

Physicians East Medical Service—Edwin W. Mitchell and Frederick Forchheimer, seniors; Louis G. Heyn, junior.

Physicians West Medical Service—George A. Fackler and Oliver P. Holt, seniors; Allan Ramsey, junior.

Physicians South Medical Service—John E. Griewe and Mark A. Brown, seniors; Henry L. Woodward, junior.

Neurologists—Herman H. Hoppe and Frank W. Langdon, seniors; Philip Zenner, consultant, and Robert Ingram and David I. Wolfstein, juniors.

Surgeons—Joseph Ransohoff, National P. Dandridge, Edward W. Walker, John C. Oliver, Horace J. Whitacre and Simon P. Kramer, seniors, and Casper F. Hegner, Arch I. Carson, Carl R. Hiller, Harry H. Hines and Frank E. Fee, juniors.

Orthopedic Surgeons—Albert H. Freiberg and Charles E. Caldwell, seniors, and Robert Carothers, junior.

Dermatologists—Augustus A. Ravogli and Meyer L. Heidingsfeld, seniors, and Elmore B. Tauber, junior.

Oculists—Robert Sattler and Derrick T. Vail, seniors, and Victor Ray, junior.

Laryngologists and Aurists—Samuel E. Allen and John W. Murphy, seniors.

Pediatricists—Allyn C. Poole and B. Knox Rachford, seniors, and Alfred Friedlander and Frederick W. Lamb, juniors.

Obstetricians—William D. Porter and George M. Allen, seniors, and Dr. Robert W. Thomas, junior.

Gynecologists—Charles A. L. Reed, Charles L. Bonifield, John M. Withrow and Sigmar Stark, seniors, and James W. Rowe, junior.

Pathologist—Paul G. Wooley.

Radiographer—Sidney Lange.

Cystoscopists—A. P. Cole and J. Louis Ransohoff.

Dentist—H. C. Matlack.

Laboratory and Museum—W. E. Wherry, Frederick W. Lamb, Arthur E. Osmond, Charles S. Rockhill, Marion Whitacre, William H. Strietmann and A. P. Cole.

Anesthetist, with Rank of Junior—F. H. Mc-Meehan.

The Ohio State Medical Journal

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A SUGGESTION TO COUNTY SOCIETIES.

In considering the work of the County Societies, in their relation to the State Organization, and in particular the reporting of members, remitting dues, and so on, we have come to the conclusion that the old and established custom in so many societies of having a separate office of treasurer is responsible for much of the confusion that at times arises.

There are only two reasons for such an office: first, in large societies where the duties of collecting, caring for and disbursing the funds entail considerable effort and expenditure of time; and second, the providing another member of the society with an office.

On the other hand there are a number of arguments against such a position. It complicates the machinery unnecessarily; the secretary must notify the State officer of the election and have the treasurer remit the dues, or obtain from the treasurer the necessary amount. This may work well if the co-ordination of the two officers is good, but often it is not, and delays and mistakes occur.

The treasurer is often elected as a compliment, and not infrequently does not at

tend the meetings or to the duties of his office. The secretary nowadays is usually selected with more care, he is nearly always present at the meeting, is better acquainted with the members, can readily notify the delinquents when sending out the notices of meetings, and if given control of the funds, can remit state dues without so much red tape as at present, and in general if the two offices are combined as secretary-treasurer, the machinery of the society will be found to be much simplified and consequently there will be less opportunity for mistakes and confusion.

We would therefore recommend to the smaller societies at least, although the Columbus Academy with 312 members has found it advantageous, to drop the position of treasurer, adding the duties of the office to those of the secretary, under the title of secretary-treasurer. We hope this matter may receive serious consideration and the suggestion given a trial.

SECRET DIVISION OF FEES.

The recent address of the President of the Northwestern Medical Association at its annual meeting at Bellefontaine last month, and published on another page of the Journal, caused considerable discus-

sion during and after the meetings, and brings up an old question which should be met squarely and settled once and for all.

We hear nowadays of the tariff being "reformed by its friends," and congressional investigations of trusts of much the same character, and so it behooves the medical profession to investigate and reform this practice itself before the public learns enough of it to take the subject in hand.

There is very little doubt as to just what disposition the public would make of the matter, and that in itself seems to us sufficient reason for condemning the practice absolutely. The very reason that the transaction between the general practitioner and the specialist must be carried on surreptitiously and the patients kept in ignorance, at all hazards, brands the practice as improper at once.

As Dr. Hubbard says the fact that the patient usually desires the physician to accompany him to the hospital or to be present at an operation and yet is reluctant to properly compensate him for such services, is no reason why the specialist should divide a just fee—and thus pay the attendant out of his own pocket.

On the other hand the attending physician justly claims that frequently he receives little or nothing for his services while the surgeon, consultant or specialist is paid a good fee and paid promptly.

Let us have a square deal all around. A square deal for the patient as well as for the consultant and the attending physician, and let the negotiations be open and above board. The secrecy and clandestine, covert character of the usual transaction opens the way to a multitude of evils which may, if uncorrected, bring some time the fair fame of our profession into public odium and distrust.

PREVENTABLE BLINDNESS.

The Ohio Commission for the Blind is making excellent progress in its propaganda

for the prevention of blindness. The people far and wide are being taught by public meetings, addressed by eloquent speakers with lantern slide illustrations, of the degree of preventability of this terrible affliction, and in due time those directly accountable for a certain per cent of the cases will find that the public will soon begin to place the responsibility where it belongs.

When this time arrives, unless they take heed in good time, many members of our profession will find themselves haled before the bar of public opinion and censured severely for their share of guilt for sins of commission or omission leading to a fellowbeing's blindness. The former, because an accomplice before the fact is equally guilty with the principal, and the physician who does not protest against the marriage of a young man whom he is treating, who is the victim of gonorrhoea, acute or chronic, in the light of subsequent blindness in the offspring is nothing more or less than such an accomplice.

And any physician nowadays who neglects to use the prophylactic treatment of the eyes of the new-born child, especially in any case in which there may be the slightest suspicion of Neisserian infection, for this omission is gravely responsible for consequences which may arise. Indeed, the time may come when some one may test the degree of such responsibility in a suit for malpractice. Emerson defines malpractice as "The lack of proper care, skill or diligence in the performance of a professional act," and today who can say that neglect of the Credé treatment is not such a lack?

Unless we would incur the danger of considerable odium and possibly discredit, the medical profession must take a firm stand on this question and in the first place endeavor to protect innocent women and through them their offspring, and in the second place insist upon the use of the Credé treatment, and stigmatize its neglect as malpractice.

OUR STATE HOSPITALS FOR THE INSANE.

We would direct attention to the address of Dr. G. E. Robbins on another page of the JOURNAL based upon his experience as a trustee. The criticism has been often voiced that our hospitals for the insane are too much in reality places of detention, rather than veritable institutions for treatment. The belief that this is true in some instances, at least, is forced upon us.

It would appear, however, that the fault is not due to inefficiency or incompetency of the medical staffs, but rather to the system in vogue in this state. So much stress is laid upon the reduction of the per capita expense for maintenance, that this has become apparently the main desideratum. The demands of the routine business upon the time of the Superintendents are so great as to make it impossible for them to give as much of their personal attention to the medical needs of the inmates as they would like to do. It seems to us absurd to place a trained alienist at the head of an institution and then compel him to give most of his time to mere business routine duties. Other states have awakened to this, and have provided measures for relief which have proven very effectual, and it seems to us that Ohio should fall in line.

If it is not deemed advisable at this juncture to divide the position, providing for a medical superintendent and a business manager, it would at least appear to be a step in advance to follow Dr. Robbins' suggestion and seek the appointment of a visiting medical staff of alienists, to foster the medical interests of each institution, and encourage the staff in every possible way in routine treatment as well as in original research to the end that there may be greater returns in the shape of more cures, more patients improved and above all an increase in the knowledge of the various underlying pathologic conditions which may enable us

to prevent many cases of insanity in the future or to cure them in their incipency.

EDITORIAL NOTES

ANNOUNCEMENT OF MENTAL AND NERVOUS DISEASE SECTION.

The time is at hand to prepare the preliminary program for the meeting of the State Association at Toledo next May. The slight trepidation on the part of some last year as to the possibility of the section being unable to stand alone may not now concern us. The section was successfully launched last year; the meeting was a decided success in spite of the comparatively small body of physicians to draw members from and the unorganized state of the section. Already subjects are in the hands of the secretary and applications for place on the program. More papers are wanted, and it is imperative that the titles be sent to the secretary as soon as possible. Address all communications to S. P. Fetter, Portsmouth.

The following announcement published in the daily papers is of considerable interest and will have an excellent moral effect in supporting the authority of the State Medical Board:

"Governor Harmon and Attorney General Denman, who comprise the Board of Appeals from Decisions of the State Board of Medical Registration, recently rendered a decision that they had no jurisdiction to compel the Medical Board to grant an Ohio certificate to Dr. R. G. Woodworth under the reciprocity arrangement with the Medical Board of Colorado, in which state Dr. Woodworth practiced his profession after leaving Columbus.

"This decision was reached because the question involved was the failure of the Colorado Board to testify in its reciprocity certificate to the character and fitness of the physician certified.

"Attorney General Denman said the Board of Appeals would have entertained the case had it involved a charge of moral turpitude, as then there would have been facts on which the charge was based and which the Board of Appeals could have reviewed. But a question of character or professional fitness was one wholly within the province of the State Medical Board.

"Secretary Matson, of the Medical Board, said this was the first time there had been official confirmation of the Medical Board's contention that it had discretionary powers as to issuing reciprocity certificates."

We are glad to note such comments in the daily press as the following:

CASES OF PTOMAIN POISONING.

The reports industriously circulated over the country that there has been a notable increase in the number of ptomaine cases, since the enforcement of the new pure food law which has elimin-

ated the use of preservatives, State Dairy and Food Commissioner Dunlap declares are misleading and are for the purpose of discrediting the law. Before the enactment of the law manufacturers of borax and boron compounds which were used on meat, fish, fowl, oysters, sausage, etc., found a big sale for these products, but as a result of the enforcement of the new pure food regulations they find much of their business gone. The claim is now made that these products kept the food in a hygienic and healthful condition and would prevent ptomaine. Commissioner Dunlap says there is nothing in these claims. He says that there are no more cases of ptomaine now than formerly, in proportion to the population, but that there may seem to be more because every case that the interests hear of they take up and exploit as much as possible. Their object is to secure amendment to the law so that they can again market their preservatives.—Columbus Dispatch.

This is an intelligent presentation of the case, and shows to what lengths the food adulterators are going. This should have an excellent effect in forming the public as to the truth of the question, coming as it does through an unbiased journal.

ONE YEAR'S OBSERVATION AS A TRUSTEE.

G. E. ROBBINS,* M. D., CHILLICOTHE, O.

Keep in mind, gentlemen, that the remarks I shall make today pertain wholly to the state institutions for the insane. One year's observation as trustee has filled my mind with queries, and, if from the discussion that leads out of this paper shall come the answers to my interrogatories, I for one shall be fully paid for all the effort required to bring you this brief discourse.

One year as trustee of any hospital should disclose to the average man the character of that Hospital. Twelve months of service in a state institution should make more or less of an impression of the workings of the hospital with which he is connected. These impressions should be favorable or otherwise, as the routine management appeals to him as being toward a betterment of conditions or on the contrary—tend in the other direction.

My ideas of the duties of a trustee of a hospital were rather vague when I first was called to the service of the state. I had the idea that I was supposed to give of my very best effort to the institution in every department, to learn as quickly as possible the physical condition—take an inventory of its equipment—see to it that the patients were well fed and clothed and in addition to all that and above all that, to assist the superintendent in every possible way in treating the inmates to carry out the hospital idea—to restore to

health, home, friends and citizenship just as many patients as it was possible to do.

I had the idea that these great, splendid buildings with their beautiful environment which the state was maintaining with such a lavish hand and with such a Christ-like charity, were really hospitals; that these massive buildings were the beautiful expressions of a well directed effort to replace mental illness with mental soundness; that to treat the insane and to rejoice over cures was the ultimate end of all effort.

But my first meeting with the board was a very great surprise. I do not now recall a single topic of discussion that related directly to the treatment of a single patient—and I mean no reflection on any man or set of men—and I am of the firm conviction that the men composing the different boards of the state are above the average, and I am fully persuaded that they are honest, but under the prevailing custom and a policy that has come down through the years, the treatment of the insane has been left wholly and solely to the superintendent and his assistants.

My first query: What was I, a trustee, to do? Pay bills, stamp my name on vouchers by the score, contract for butter, milk, flour, meat, clothing, etc.? Sign requisitions on the auditor of state, eat a good meal or two, smoke fragrant Havanas and take the train for home, and repeat the process every thirty days? Was that the end of my duty to these inmates and to the state of Ohio?

Am I criticising the present plan of trusteeship? Rather, I am trying to indict the pernicious custom that has obtained for many years.

Administrations change and boards and officers go regardless of fitness. Politics, that necessary characteristic that divides men, has made it almost imperative that these offices change with a change of administration. Politics is to blame for most of the sins of omission and commission that can be charged up. But are there other criticisms—or rather should I say, have I other queries? Yes. If these great institutions are hospitals, then all the inmates are patients. Presumably every commitment is a patient, every patient received at a hospital is a separate case for study, for treatment, for classification. The object of these institutions, I take it, is to do for the mentally ill something that cannot be done at home. The treatment is supposed to be of the very best and latest and most potent. Now, how much of the *treatment* in these hospitals concerns the board of trustees as now constituted, mostly laymen? Are they interested, say you? How much time is now given by the board to the actual treatment going on? Suppose a superintendent should lay before

his board detailed clinical reports of his cases and explain them as he would have to do, in terms of medical lore, do you think it would interest them? Not at all. Half the board would be asleep in five minutes and the remainder infected with the hook-worm disease in ten. And I mean no reflection on these men, either. It is simply absurd to claim that you can be interested in something wholly foreign to your life's work. If the law lays hold of a man and forcibly locks him up, it becomes responsible for him. If then the state undertakes to treat this man, it is a crime, indeed, if it does not surround him with the very best intelligence directed toward restoring him to sanity, to home and to a life of usefulness. It is a serious reflection to even intimate that a private sanatorium can do more than can this great State of Ohio.

Are our state institutions mere places of detention, as is often charged? Does the state duty end when the doors are closed behind the patient? Or does the serious responsibility accepted and exercised by the state begin at this time?

We shudder at a mine disaster that kills one hundred souls; we are shocked when fifty people are mangled and burnt in a railroad wreck; we stand aghast before the news of a disaster at sea that buries from earth a score of human beings, but what are our feelings at beholding ten thousand of our citizens in this good and great State of Ohio, consigned to a living death behind bars? I really fear that we are not fully awake to the seriousness of our duty to these stricken ones. One human life saved to its family, friends and citizenship is worth a mighty effort.

One human being buried in a mine would excite the sympathy and effort of thousands of men and ten thousands of money. Surely ten thousand patients locked in our hospitals should awaken in us an earnest effort to do all in human power that they may, as many as possible, be restored to health.

Another query: Does or does not the board depend upon the superintendent for all the detailed information concerning the institution? Is not the superintendent the real head of the hospital, and rightly so, and does not the per capita cost depend almost solely upon him? And if that be true, does he not have his hands full of the *business* of the institution?

And the research work—the laboratory work—the actual treatment of the insane must of necessity be left to the assistant physicians who are paid the munificent sum of fifty to one hundred dollars per month.

How can we improve the present plan? A question that deserves serious reflection. Could a central bipartisan board better house and better

feed the state's wards than is now being done? No—emphatically, no—they could not improve the physical conditions, I believe. From the viewpoint of the hospitals there would be no improvement, but from the state's standpoint it would be a decided step forward. A central board would have a complete inventory of the state's property and could unify and make uniform the equipment in each institution. It could do the buying in an advantageous manner and most certainly save enough money to the state to pay the salaries of the board. Its recommendation to the legislature would meet with more favor, and above all, politics would be banished from these hospitals, the last place on earth it should ever find a foothold. Superintendent and officers would certainly remain as long as they were doing satisfactory work, and not be asked to resign on account of a change in administration. But one central bipartisan board, however much desired from a business standpoint, cannot, in my opinion, cure all the defects, nor will it solve the problem how best to do for these unfortunates that they may be cured.

It is important that the financial affairs of these state hospitals be managed judiciously and economically. A business that handles \$200,000 annually is of such moment as to engage good sound executive ability. But is it not equally important that while the state is spending \$200,000 to maintain a hospital, that the very best talent and all the best help obtainable is secured to the end that we have a hospital? In other words, let us give to the treatment just as much attention as we show to the business.

Another query: Could not a medical board, say of three, serving as the present boards do, meeting, counselling, inspecting and advising with the superintendent, be of great benefit? Would not the fact that a board of interested physicians would call monthly or oftener, for the purpose of examining patients and inspecting records, stimulate the superintendent and assistant physicians to do their very best work?

Is it not the part of wisdom to leave the supervisory work of these hospitals to physicians? Would you expect a great mercantile business to be successfully carried on by farmers? Would you place on the board of directors of a great bank men whose every interest is foreign to great financial matters? No, of course not. Then why expect much improvement in the way of results from hospital work, when your board of trustees is made up of men whose every training has been in business matters and not among the sick or afflicted of our state?

No, gentlemen, let's be practical; let's be hon-

est; let's get together for the good our our more unfortunate, pitiable neighbors and do for them all that it is possible to do. If one central bipartisan board can do the business of the state better than is being done under the present plan, and I believe it can, let's advocate one good strong business board.

If a medical board can add any to the efficiency of the treatment now in use in the State of Ohio, let's have it. Let's not be content to stand still with insanity all about us, and on the increase, but with an earnest, united effort, plant Ohio's flag, as far as our hospitals go, away up where it rightly belongs, in the very forefront of medical and rational success.

ADDRESS OF THE PRESIDENT OF THE NORTHWESTERN
OHIO DISTRICT MEDICAL ASSOCIATION.

THE SECRET DIVISION OF FEES.

THOMAS HUBBARD, M. D., TOLEDO.

The speaker, after mentioning the widespread movement of recent times toward the organization of the medical profession, spoke of some other tendencies to be noted as well. He said that proprietary medicines flourished because of the indifference to the U. S. Pharmacopeia, just as faith healing got its start because of our neglect of psychotherapy.

He next discussed the "Psychology of Practice," showing how this constitutes the entire stock and trade of the quack, and demonstrating the value of the proper use of the psychologic factor in ethical practice. He warned against the dangers from the commercialism so prevalent in all lines today, and continued as follows:

The secret rebate system has favored the existence of the most powerful trust that the world has ever known. We all protest at such connivance to divert trade from the natural channels established by free competition. There is today a growing suspicion liable to develop into a positive distrust against the profession as a whole on account of the secret practice of division of fees. The public has the right to protest because it is unfairly dealt with; and the profession suffers from unjust discrimination against proficiency and honesty.

We may group this *secret rebate system* in the following manner:

Division of fee. That is, the consultant pays to the physician in charge out of his usual fee, a varying amount ostensibly to compensate him for extra time and services necessary to bring about the consultation. Honestly conducted one must admit that there is an element of real generosity on the part of both for neither can be adequately

compensated, and hence this must be classed as bad business, to say nothing of the suspicion of connivance that will inevitably attend such a transaction. The fact that it is done in secrecy is proof that both parties are ashamed of it.

Addition of fees. The patient is presented with a bill, in the name of the consultant, which includes a fee intended as a complimentary present to the attending physician. This may be only a mild degree of extortion but the practice of it naturally leads up to the serious offense of encouraging unnecessary consultations.

Multiple fees. The consultant states the amount of his fee to the attending physician and he conducts the bargain with the patient. This is unfair and unwise from a business standpoint. The bill presented in the consultant's name may include items that do not belong there. There is also a problem in equity between the physicians involved. The fact that the attending physician is to carry out special treatment, or conduct the post-operative management, taking perhaps a greater responsibility than the consultant or operating surgeon and for which he cannot charge more than the ordinary fee prevailing in his practice, was probably the origin of this kind of a bargain. The fair and square deal in such cases is the establishing of the practice of notifying the patient beforehand that the attending physician will expect extra compensation for the unusual services contingent upon the consultation or operation. The duty of the consultant is clear in cases having limited means. His fee must be reduced so that the resources of the patient will not be drained to the extent of making it impossible to pay the attending physician commensurate with his share in the responsibility.

He who practices division of fees, addition of fees, or deals in multiple fees is liable to find himself compounding an extortion. A frank understanding between the physicians concerned as to the financial condition of the patient, and the tactful intervention of the consultant to aid the attending physician in getting proper compensation directly and openly from the patient will remove the excuse for connivance. Is it not clear that this practice of secret division of fees encourages the young physician ambitious to succeed and whose ethical principles are yet in process of development, to cultivate the faculty of shrewdness rather than high professional attainment? It is our duty to uplift the ideals of the coming generation of medical men rather than suggest to them that success and an honorable career can be attained by the application of disreputable commercial methods to medical practice.

The descent is easy from "division of fee" to

extortion, and there is no place where this subject can be discussed to better advantage than in the district medical association. If we allow ourselves to drift we will sooner or later strike the rocks of public distrust. You know what the drastic remedy will be and experience proves it to be very effective. We will be subjected to the scourge of publicity such as many medical communities have experienced. If necessary to stop the practice it becomes the duty of the profession to take the initiative in the public press. When the people are put on guard all physicians will suffer for a time, but such an exposure will checkmate the offenders. For the welfare of the noble profession and as honest men we must all openly take a firm stand against any kind of practice that can possibly compromise our honor. We must keep every part of the magnificent institution of medicine clean and sound that no parasite or saprophyte may initiate a corroding process from within or from without. It is easier to prevent decay than to rebuild.

CLINICAL NOTE.

FOREIGN BODY IN OESOPHAGUS.

S. H. LARGE, M. D., CLEVELAND.

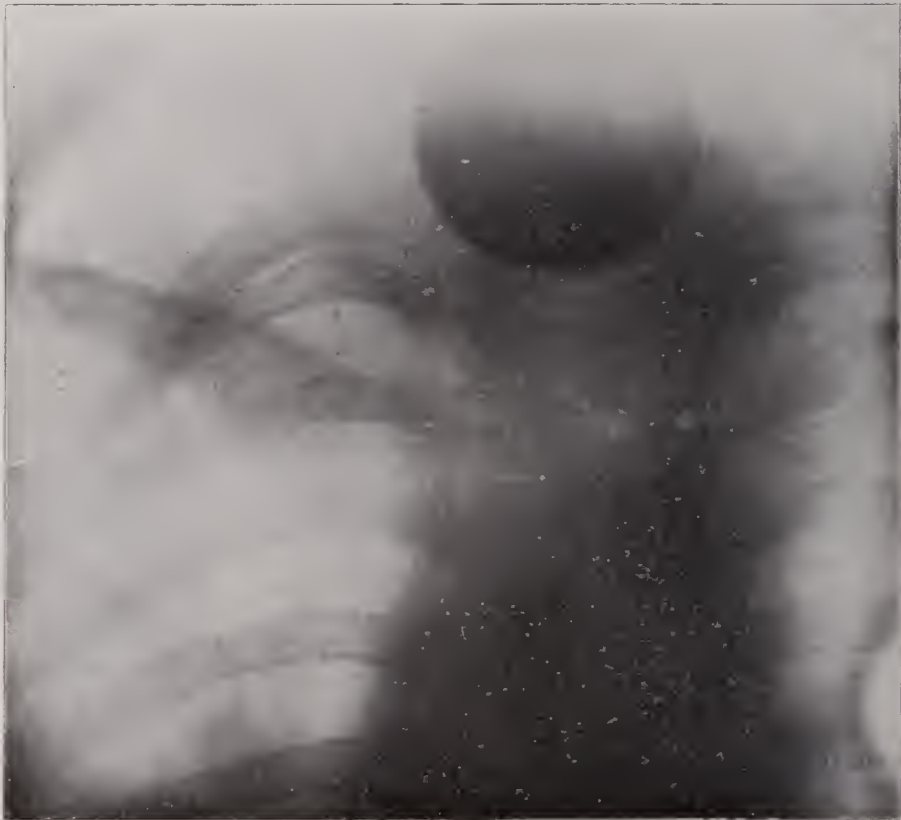
Roy D., male, age nine years, while carrying a 50-cent piece in his mouth accidentally swallowed it.

He was taken to St. Joseph's Hospital, Lorain, where Dr. Bert Garver saw him. He advised an X-ray. Plate showed the foreign body in the oesophagus just below the cricoid cartilage.

Dr. Garver found the patient in considerable pain and discomfort. He was able to swallow liquids with little difficulty. There was persistent retching and vomiting.

I saw the little patient about four hours after the accident and under ether anesthesia the oesophagoscope was passed and the half dollar was plainly seen lying perpendicularly. With a pair of oesophageal forceps the foreign body was grasped and considerable traction had to be made to dislodge it.

I feel certain that this is another case that the oesophagoscope has saved the patient from the operation of oesophagotomy.



The patient developed no unpleasant symptoms following the passage of the tube.

The foreign body can be plainly seen in the plate herein shown.

FOREIGN NOTES.

AN INDIAN EXPERIENCE IN CATARACT EXTRACTION.

C. F. CLARK, M. D., COLUMBUS, O.

During the past two years the attention of the medical profession has been directed to the new operation for the extraction of cataract in its capsule by what is known as the method of Major Smith, of Jullundur, India, and while many of the points to be considered in such a study are of a technical character and concern the specialist only, there are certain practical aspects of the subject which I think may be of interest to all practitioners.

In the old operation, after making the corneal section and, if necessary, performing an iridectomy, we insert a small instrument, a cystotome, and divide the capsule of the lens and press out the contents, or so much as will come, leaving the remaining cortex of the lens to be absorbed and the capsule to be divided by a later operation after the corneal wound has thoroughly healed.

By the new method, after the iridectomy has been performed, a special manipulation is employed by which the lens is dislocated and delivered in its capsule, thus avoiding the necessity of a secondary operation.

This operation has certain manifest advantages which, if not gained at the cost of corresponding disadvantages, should certainly class it among the great steps forward in ophthalmic surgery, but in an attempt to study this subject practically I found myself in the position of many of my friends among the ophthalmic surgeons of the country. The procedure being of a highly technical character and difficult to fully comprehend in all of its details from a description alone, I wished, before undertaking it in my own practice, to see a large number of operations by one who had already acquired skill and success in its performance. It will be readily understood that no American or European clinic, however numerous its patients, can, in a short period of time, afford a visiting surgeon a large number of cataract cases on which to develop a new operation and one must, therefore, be content to gain his experience of new methods very gradually and with considerable intervals between cases.

I was therefore greatly delighted when through the kindness of Dr. Green, I received an invitation to visit Major Smith at his hospital in Northern India, to study his cases, see him operate and to operate with him and under his direction on a

sufficient number of cases to thoroughly familiarize myself with his method.

While, before the announcement of the success following this new operation, I had been quite satisfied with the results I was obtaining by the old method of extraction, this operation seemed such a decided improvement that I was glad to make the sacrifice incident to a long journey to investigate it and in September, 1909, I found myself hard at work in Major Smith's clinic where, through his kindness, I had the privilege of studying some 245 operations and of doing many of them myself. He draws his cases largely from what is known as the Punjab and the neighboring provinces of Northern India and has established such an enviable reputation for skill that he now operates on some 3000 cataracts in a year and during the last seventeen years has performed some 22,000 extractions.

While the surroundings are somewhat primitive the originality of the operator and the large number of patients treated affords one an experience which makes this clinic one of the most interesting spots in the world to an ophthalmic surgeon. To see Major Smith quickly make his diagnosis and select the operable cases from among the throngs of picturesque villagers and country people who crowd about him as soon as he makes his appearance on the porch of his crude hospital, and then pass back and forth from one table to the other while two attendants keep him supplied with cases from the waiting crowd of natives who sit cross-legged in oriental fashion on the cement floor of his operating room, and to see the skill with which he handles the knife and the magic way in which the lenses yield to his deft fingers, is sufficient reward for all the discomforts of a long journey in the tropics even when made in the season of the monsoon.

I know of no other clinic, either in Europe or America, in which the visiting surgeon is accorded the privilege of extracting large numbers of cataracts every day for a number of weeks, having at every step in the unusual procedure the advice, suggestions and council of such an operator.

A minute description of this operation is not, perhaps, of especial interest to the general practitioner (for the specialist I have attempted such a description in the Archives of Ophthalmology for January, 1909), but it will be readily understood that certain precautions must be observed which are not called for in the old operation, though a little practice and careful study soon enables one to avoid serious accidents. The more important features of this operation and those which appear to be essential to its success are the

large incision, the peculiar method of making pressure and keeping the wound filled by the advancing lens during its delivery, thus generally preventing loss of vitreous, and above all, the method of retracting the brow and holding the lids well away from the eye so as to eliminate straining, and then operating on the eye as it lies in this deep socket without taking the risk which often comes from an attempt on the part of the operator to obtain the patient's co-operation by telling him to look up or down.

A number of cases of extraction in the capsule had been reported at the meeting of the American Medical Association, held in Atlantic City in June, 1909, but while they were supposed to have been performed by Major Smith's method, their descriptions and the results recorded when compared with what was seen in India would indicate that the profession had failed to appreciate the significance of some very important details in the operation and these accounts, and a few cases I had seen operated before my departure for India had failed to convince me of the entire practicability of this method. I believed, however, that even if it did not yield excellent results in a sufficient proportion of cases to warrant its general adoption, it still had a large field of usefulness in slowly advancing, immature cataracts and I was willing to make the expenditure of time and money involved in the journey to equip myself for dealing with this class of cases.

Like many others I was skeptical on some technical points, especially as to the danger of certain accidents during the operation: as to the possibility that racial peculiarities might account in a measure for Major Smith's success and as to the degree of traumatism to which the eye was subjected in this operation. My impression was that we were dealing with an operation which, while undoubtedly yielding excellent results in many cases, was attended by cosmetic defects and more or less imperfect final results in such a number as to make it inapplicable in our practice among a critical and exacting public, excepting, perhaps, in cases of immature cataract, which could not await the ripening process and in which, owing to their immaturity, it would be dangerous to operate by the old method.

The result of my investigations convinced me that the operation is one not easily understood from a written description alone and that many of the operations thus far reported in this country do not fairly represent Major Smith's method. I also received a very strong impression that the accidents, which undoubtedly do sometimes occur in this operation, are not of so frequent occurrence, or of so serious a character as to equal

the disadvantage of leaving in the eye a lacerated capsular membrane and a mass of lens cortex which very often produces a troublesome iritis in the eyes operated upon by the old method.

The claim that racial peculiarities account for the success of these Indian operations could not be established by a careful study of the patients seen at the Jullundur clinic. They did not, as a rule, seem to be more favorable subjects for the operation than a corresponding class of patients in this country. And, while a slight degree of traumatism, somewhat in excess of that generally incident to the old operation, had sometimes seemed to result from the manner of rubbing the cornea with the strabismus hook employed by some American operators in delivering the lens, this maneuver I found was not employed by Major Smith and the resulting traumatism did not occur.

The patients were drawn mostly from the agricultural, artizan and laboring classes, and included Mohammedans, Hindoos and Sikhs, from the Punjaub country with Kashmiris and Afghans from beyond the Kybur pass. They were generally fed and cared for while in the hospital by their friends or relatives who came with them and camped in the neighborhood or slept in some out of the way corner of the town while awaiting their recovery. They were often ignorant but generally quite obedient and it was surprising under their circumstances and amid their surroundings to see how well they cared for their eyes. A well trained native assistant surgeon gave them such attention as they required and kept records of their condition from day to day and these bed records with their condition on leaving the hospital and detailed notes of the incidents and accidents of each case made at the time of operating by Major Smith himself were by his kindness sent to me after my return to America.

These notes, supplemented by my own observations of the cases which I was able to study before they left the hospital, and the considerable number of old patients returning for operation on a second eye, enabled me to form a fair idea of the final results which were obtained by this method of operating, though the period covered by these observations was not so long as I should have desired.

The question may naturally be asked, is this operation to supplant the old method and be adopted in all cases? Basing my opinion on my experience in India and a limited, though satisfactory experience with this method since my return, I should say that a further study of the operation as applied to our practice will be re-

quired before an unreserved answer can be made to this question.

In a matter so serious as this, we must advance with caution and while I have convinced myself that it is a feasible operation, applicable to many cases and yielding brilliant results, there are some cases to which it is not so well adapted and for our purposes its exact limitations have not yet been positively determined.

Certainly it is not well adapted to cataract in young people. Major Smith prefers the old method in cases less than thirty years of age, in whom an unusual degree of force is required to dislocate the lens, and among older patients some yield much more quickly and easily than others.

It is probable that after we have obtained the combined experience of a number of conservative and careful operators, who will study the subject from every point of view, we will be able in advance to recognize the cases in which there are conditions which render the old operation, with all of its disadvantages, preferable. In other words we will be able to determine the exact limitations of the new method.

In the meantime we know that in a large class of cases it yields brilliant results and in the very important group of cases in which we have a slowly advancing immature cataract, in which vision is failing and relief must be obtained, this operation is often our only safe resource, as the old method, in many instances, will leave so large a mass of adherent cortex as to provoke a degree of iritis or cyclitis which will endanger the final result.

CORRESPONDENCE

DANGERS OF SCOPOLAMINE.

Editor Ohio State Medical Journal, Columbus, Ohio:

Dear Sir—On page 707 of the December (1909) number of your journal there is a note on the "Dangers of Scopolamine" in which you quote from the excellent paper of Dr. C. M. Nicholson, of St. Louis, with discussion by Drs. W. B. Dorsett and M. G. Seelig, adding "From the foregoing it is clear that as yet the routine use of scopolamine should be avoided by physicians. In this you are quite right, because as Dr. Seelig claims some scopolamine of low levorotary power is dangerous; but as I long ago pointed out a combination of hydrobromide of hyoscyne with morphine is perfectly safe for both surgical and obstetrical anesthesia. The hyoscyne hydrobromide made from *hyoscyamus niger* appears to

be identical with chemically pure scopolamine, but possesses the advantage of being absolutely reliable, and safe in the dosage used—never being of low rotary power from the presence of impurities as is scopolamine made from *scopola atropoides*, *scopolo carniolica* and *scopola japonica*.

One one-hundredth of a grain of hydrobromide of hyoscyne with one-fourth of a grain of hydrobromide of morphine (or better one H. M. C. tablet which Dr. Dorsett condemns) given hypodermically three hours and a similar dose one and a half hours before any capital operation with a few drops of chloroform at the time of beginning work gives the nearest approach to ideal anesthesia we now possess. I have used it in more than 2000 major operations without an accident and have received reports of more than 7,000,000 injections with only eight fatalities—surely not so dangerous as the impure scopolamine proved to be.

As to Dr. Dorsett's objection to H. M. C. tablets in obstetrics, permit me to say that trouble has arisen from improper dosage or careless use only. If the following technic is followed there will be no danger to either mother or child: To a primipara give a full strength tablet, hypodermically, when pains become severe (this consists of hyoscyne hydrobromide gr. 1-100, morphine hydrobromide gr. $\frac{1}{4}$, cactin gr. 1-67); in one hour, or more, if the woman is making much fuss, try the memory test, i. e. show some object such as a watch and in ten minutes ask her what was shown her, if she does not remember nothing is needed, but if she does recall the object one-hundredth of a grain of hyoscyne hydrobromide is to be injected; in another hour, or longer, if the memory test indicate it, another injection of hyoscyne may be given. To a multipara a half-strength tablet is to be given when labor pains become severe; repeating the half-strength does in an hour or two if memory test shows the need; the third injection to be straight hyoscyne if anything more than the first two injections shall be needed.

By following this method an almost painless delivery can be secured without the dangers alluded to by Dr. Dorsett. While the mother always makes an outcry during the pains and appears to be suffering severely (which will lead the doctor to give too much morphine unless the method here described of relying on the memory test is followed) she will have no recollection of it next day. If forceps delivery is demanded a few (and a very few indeed) drops of chloroform may be given to complete relaxa-

tion and the operation performed without the knowledge of the woman even though she may begin talking before the work is finished. To the obstetrician in the country, working without trained nurse or another doctor as assistant, this

form of anesthesia is of great importance; to suffering woman it is indeed a God-send.

Cordially yours,

EMORY LAMPHEAR.

St. Louis, Mo., December 29, 1909.

MEDICAL ECONOMICS

By J. W. CLEMMER, M. D.

MEDICAL ECONOMICS.

Nathan Tucker, of Mt. Gilead, was found guilty in the United States Court, December 15, on a charge of violating the National Pure Food and Drugs Act in using cocain in an asthma nostrum (by inhalation) which he has placed on the market, omitting to state on the package that the medicine contained cocain. The sentence was deferred pending a motion for a new trial. "Tucker's Asthma Cure" is well known. Now that the label must tell the nature of the dope, its popularity will decline.

The time is coming when the fraud, as well as the evils of nostrums will be exposed by the legal requirement of the full formula. "Let the label tell" is public policy. There are no secrets or secret remedies in medicine to cover fraud and evil. When the people understand these things they will look to their own interests. The awakening of the public conscience in political and industrial life some day will attack the frauds perpetrated by proprietors of newspaper and nostrums.

The December 11th number of the Journal of the A. M. A., page 2019, calls attention to the new order of prescription fakes in "Woman's Department" of otherwise reputable newspapers. Here "health and beauty talks" act as warp and woof of nostrum exploitation. Answering queries from correspondents is the expression of proprietary medicine advertising. "Beauty aids" are spun out in form of prescriptions apparently calling for official drugs, but most of them containing a proprietary. "Luxor," the nostrum vendor, declares under the *nom de plume* of Mrs. Mae Martin, "cured a dear friend of eczema."

"Parnotis," a flesh reducer, "ten pounds in a few weeks," selling for fifty cents, contains two cents worth of *sodium sulphate* and *sodium bicarbonate*. "Almazon" contains *gum trag*, *borax* and *mag. carb.*, costing three cents and selling for fifty cents. Mrs. Mae Martin says it cures black-heads, freckles and tan. She also says: "You can make at home a fine liquid powder that softens and whitens the skin by putting two teaspoonsfuls of

glycerine and four ounces of "*spurmax*" (the joker) in one-half pint of boiling water. *Spurmax* is composed of Epsom salts and traces of perfume, and coloring matter. Boric acid, borax and common salt go to make up "*crystos*" for tired and inflamed eyes, recommended in "Secrets of Beauty and Health" in the Woman's Department of the modern newspaper, exemplifying other nostrums foisted upon an unsuspecting public by the consciousnessless connivance of publisher and fakir.

A POPULAR DEMAND FOR MENTAL HEALING ON A SCIENTIFIC BASIS.

Some nervous and functional disorders are of mental origin, characterized by defective mentality. Symptomatically, organic and nervous diseases are often closely allied. Pathologically, they differ as the psychasthenias from structural disease. The stigmata of faulty mentality are to be considered in differential diagnosis. Symptoms alone may be misleading. Treatment will differ according to the diagnosis. In nervous troubles, the individual instead of the disease from which he suffers, is to be treated. Mind produced diseases require mind treatment; yet the round of physical therapia is visited upon sick organs and tissues regardless of psychopathic conditions. Auto suggestion in operating upon the subconscious faculties, according to mental constitution and influences, as they are good or bad, tend either to the relief of production of nervous disease. In ignorance of such psychological truth, many cults despite their doctrines, theories and methods, stumble upon the principles of psychotherapy. To the medley of mental healing must be added the placebo.

To complete the travesty upon psychotherapy the minstry enters the faith cure juggling contest and teaches the doctrine of divine intercession in answer to prayer. The cured patient attaches faith to the thing or doctrine employed. Faith is the essential element in psychotherapy, based upon the truths of psychology. Faith elicited by use of anything other than psychic education and influence is based upon error. Faith born of placebos, pills or prayers, theories and methods

of "healers," amulets, sacred places and other false vehicles of suggestion, hinders the progress of scientific therapy.

The public meanwhile, wandering or driven from the fold of psychological principles, like shorn lambs, confused and confounded, see cures in church relics and incantations, in charmed beads and rings, in passes, rubs and vibrations, in street fakirs and medical cults. All are but parts of the therapeutic comedy of errors.

There is only one remedy and that is for medical men, as becomes their duty and their function, to teach and practice the truth of psychotherapy. The cult bound public is looking to the medical profession for new light. The Columbus Dispatch in an editorial discussing the Emmanuel movement, says: "Why should it be necessary for a physician to turn a patient over to another for mental healing. Why should not the physicians equip themselves for this work as well as for that which they long have been doing? The psychology of medical practice has been too much neglected and the result has been the impairment of the physicians' success and the growth of movements subject to abuse."

Medical organization is bound to recognize its dereliction and teach its students and the laity the truth about mental healing. The truth and laws of nature on the metaphysical plane are as immutable and cogent as on the physical plane. The day is dawning when psychotherapy will be taught, not as a system or method, but as an added agency to the armamentarium of medical practice, with its virtues and its limitations.

The next step in scientific medicine will be along this line. The disrepute into which mental therapy has fallen among healers and charlatans should no longer deter its scientific use by physicians. The people demand it.

OPTOMETRY STILL IN THE WARPATH.

The Opticians bill was discussed in committee of the Senate last year, but was not reported out. Now it is to be introduced in the House and petitions and personal letters will besiege the lawmaker.

A new order of "eye doctors" will be created by a simple act of legislature unless its members are taught that such enactment is in the interest of a class rather than in the interests of the people. The passage of the optometry bill would result in freak provisions. Opticians would turn oculists; ophthalmology would be

farmed out to uneducated practitioners; two state boards would qualify men to treat defective sight. Treating the eyes would be declared outside the pale of medical practice. The commercial interests of the optician would be enhanced without improving his art, and other classes or cults would find the state obligated, by such enactment, to grant still other boards and standards.

The employment of means other than the use of drugs, medicine or surgery constitutes the new practice. The essential requirement of medical diagnosis is neglected, and the optician with no means of differentiation, necessarily treats all cases from the view point of visual defect due to purely optical causes. Meanwhile the cases of defective sight due to trachoma, glaucoma, nephritis, syphilis, etc., are losing the benefit of proper recognition and treatment. The limitations of optometry impose a danger upon the unsuspecting patient in the treatment of the eye which the state can not place upon the public without violating public policy.

The protection of the public health is the object of the medical practice act, and it must be likewise the sole object of any act to license opticians. The standards of treatment for defective sight maintained by oculists in every city and taught in medical colleges, furnish the only safe protection to the people in the treatment of these diseases. These standards are maintained by physician and oculist, and the fact that the opticians are not willing to meet the same requirements shows conclusively that they are not moving in this matter in the interest of the public so much as for their own benefit.

The fact that physicians and surgeons entitled to practice under present laws, are exempted from the requirements of the bill, is an open admission by the opticians that the present medical standards are sufficient to insure ability to treat the eye, and sufficient protection to the public. All our medical and public health laws were enacted upon the solicitation of physicians, who have ever been anxious that the highest qualifications be required of all practitioners because the public needs medical practice protection the same as it needs fire or police protection. Physicians are not opposing the opticians as such; they protest against this bill because it provides lower standards for an important branch of medical practice; because the state would thus recognize different standards for the same professional service; because it jeopardizes the health interests of the people.

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKee, M. D., Collaborator.

The Brown County Medical Society met at Georgetown, O., November 17. The following program was rendered: Social greeting; business; Paper, "The Financial Side of the Practice of Medicine," Wesley Love, Higginsport; discussion. Dinner at the Nation Hotel. "Hydrotherapy," H. M. Chaney, Sardinia; "Chronic Gonorrhea," Dudley Webb, Cincinnati; discussion, general remarks.

SECOND DISTRICT

R. H. Grube, M. D., Collaborator.

The Shelby County Medical Society met December 2. The following resolutions were adopted:

Resolved, That it is the sense of the Shelby County Medical Society that the State Legislative Committee, in conjunction with its attorney, shall at the next meeting of the state society, report a method for the formation of a State Medical Defense League.

The following officers were elected: A. W. Grosvenor, Sidney, president; E. A. Yates, Sidney, secretary.

The retiring president, D. E. Spahr, of Clifton, delivered a stirring address before the annual meeting of the Greene County Medical Society, held December 2. The address was entitled "The Physician's Warfare."

The speaker reviewed in general terms the history of medicine, showing the constant struggle against disease and pestilence which from time to time have threatened to overwhelm mankind. How from ancient days certain men have always been ready to devote themselves to this warfare, espousing the cause of humanity against innumerable foes and courageously ignoring dangers, risks of all sorts; how in order to better equip themselves they have braved public opinion, robbed graveyards and in every possible way sought knowledge. From time to time great discoveries illuminated the darkness, but steadily, progressively, the small group constituting the medical profession kept up the struggle unparalleled in the history of the world. The wars of great generals have been against foes of like character, visible, material, substantial; the battles of the physician have been without martial

glory, the noise of bands, and the like, and against foes invisible, intangible, infinitesimal, polymorphous, hydra-headed, innumerable.

He illustrated with examples of heroism, and continued with a call for greater exertions in the future, in part as follows:

That old repulsive and degrading disease, the very name of which it is not proper to mention in polite society, and which can only be discussed under the designation of the great black plague, is still unconquered. And in all its hideous repulsiveness is blighting and destroying hundreds of lives annually. Owing to the stigma and odium attached to its name it is tabooed by boards of health and medical statistical collectors generally. Who can tell me how many cases there are in Ohio; in Greene county; in Xenia? It is not to be inferred that it is an inconsequential disease, and has no mortality. You must look for its mortality list concealed among those who die with dementia paralytica, locomotor ataxia, arteriosclerosis, and nephritis; yes, and even tuberculosis. What proportion of these deaths are caused from the great black plague? Of the 130 deaths in Ohio annually from malformations, and the thousands of premature and still born, and a like number of blasted ova, that threaten us with race suicide, a vast proportion are traceable to the great black plague. That the disease is abroad in the land no one will deny. That the number afflicted would outnumber the cases of the great white plague as two to one would possibly be a conservative estimate. And every one of these cases is a far greater menace to the public than five cases of the white plague. They are here with all their vileness ready to prey upon the pure and lovely and to betray the innocent—Judas-like—with a kiss. Excuse my plain speaking, but this is no time for sickly sentimentalism or temporizing. We must thrust aside our false and mock modesty and inaugurate a campaign of education and restriction.

We have laws against expectorating upon the sidewalk, but the victims of this loathsome disease roam at large upon our streets, mingle freely with our people, infest and infect our out-houses, roll our cigars, and I blush to say it, bake our bread and cook the food we eat. Thus far the physician has battled with this giant evil alone, in the seclusion of his consulting room, but owing to the odious nature of the disease, patients are difficult to control long enough to bring about

a cure, and they drift into chronic invalidism and destructive death.

If the great State of Ohio, or the counties, wish to do a noble helpful work that will be of permanent benefit let them direct their efforts towards the black plague. For out of every 100 victims properly isolated and restrained in an institution for that purpose and specifically treated for a period of two years or less, 95 per cent would be permanently cured and society properly protected. For the great black plague is a curable disease, and the results will not be so doubtful and speculative as with the white plague.

In conclusion, so long as but 6 per cent of the deaths in Ohio annually are from old age or euthanasia, the physician's work is unfinished. And the world needs his counsel, advice and scientific knowledge. Let it be his lifework and motto to increase that per cent up to 50, by eliminating the preventable diseases. This certainly would be a consumation devoutly to be wished. The natural inference is, should this glorious result be obtained, that the physician himself would awake like Othello, and find his occupation gone and himself eliminated also. But this thought does not deter him or swerve him from his conception of duty.

In every great war and battles, countless numbers are slain through the incompetence, mistakes and reckless bravery of their own officers. And no doubt that in the physicians warfare some noble lives were sacrificed upon the altar of experimentation of ignorance, of carelessness—the natural evils of war.

Our society is an integral part of this great army and in looking back over the year just closed we find it has not been marked by any great battles, no raging epidemics, no scourging plagues have visited us. Only a constant advance along the line, with some brisk skirmishes. Comrades have fallen in the line of battle, others have been disabled and sent to the hospital; but the ranks are filled again, ready to do more valiant battle in the coming year. We have gained in experience and wisdom and the past year's experience should bring knowledge, and knowledge is power, always and everywhere. Wisdom and knowledge are our stock in trade; they give us prestige.

In the conflict before us for the coming year there are two classes that appeal to us for protection. These are represented by the extremes in life. The helpless babes appeal to us to be saved from the broncho pneumonias of winter, and the diarrheas of summer, and the very old who with faltering step are treading the border land of the great beyond. With their feeble bodies, and their

more feeble and wavering minds, they are really more helpless and dependent than the innocent babes. Honor age, lend a sympathetic ear to their story of aches, griefs and miseries. And when our work has been completed and our battles have all been fought out and the time of our departure is at hand for

"To every man upon this earth
Death cometh soon or late,"

we will quietly drop out of the line and the command will be given, "Close Ranks! Forward March!" and the army will move forward.

A meeting of the Clark County Medical Society was held December 13, 1909. The program consisted of a post-graduate course, the subject being "Scarlet Fever," under the leadership of H. L. Hiestand.

The regular meeting of the Clark County Medical Society was held December 20, 1909. The subject was "Variola," by H. Baldwin. The annual election of officers for the coming year was held at this meeting.

A special meeting of the Montgomery County Medical Society was held December 13, for the purpose of discussing the action of council in regards to the abolishing of the Board of Health.

THIRD DISTRICT

H. B. GIBBON, M. D., Collaborator.

The Logan County Medical Society met December 2. The following officers were elected for 1910: President, B. S. Leonard, West Liberty; Vice President, A. J. McCracken, Bellefontaine; Secretary-Treasurer, W. C. Pay, Bellefontaine; Legislative Committeeman, W. S. Phillips, Belle Center; Delegate to State Meeting, W. W. Hamer, Bellefontaine; Alternate, F. B. Kaylor, Bellefontaine.

FOURTH DISTRICT

L. A. LEVISON, M. D., Collaborator.

The Putnam County Medical Society met December 2 and elected the following officers: President, Frank Light, Ottawa; Secretary, P. D. Bixel, Pandora. W. C. Miller, of Bellevue, was elected to membership in the society.

At the December meeting of the Defiance County Medical Society the following officers were elected: President, W. S. Powell; Vice President, N. S. Blue; Secretary, J. J. Reynolds.

Chas. E. Slocum read a paper on the injury

done to the public by the use of chemicals as preservatives in canned food. This paper was considered so important to the public that the society voted to have it published in the daily papers.

The Northwestern Ohio District Medical Association held its sixty-fifth meeting in Bellefontaine, Wednesday and Thursday, December 8 and 9:

Wednesday Morning—Divine Invocation, Rev. George E. Davies; Address of Welcome, Dr. P. D. Covington; Response, Dr. S. B. Hiner, Lima; reading of minutes, report of committees, unfinished business, new business.

Reading of Essays—"Hernia; Differential Diagnosis and Mechanical Treatment," Dr. F. A. Richardson, Huntsville; "The Puerperium," Dr. J. V. Hartman, Findlay; "Uterine Fibroids," Dr. J. H. Huntley, Lima; "Intussusception," Dr. S. D. Foster, Toledo.

Wednesday Afternoon—"Glaucoma and Iritis; Practical Points for the General Practitioner," Dr. E. H. Porter, Tiffin; "The Differentiation of Cholelithiasis from Gastric and Duodenal Ulcer," Dr. Charles N. Smith, Toledo; "Arteriosclerosis," Dr. F. H. Pugh, Bryan; "Blood Pressure," Dr. L. C. Grosh, Toledo; "Corn and Pellagra; A Contribution to our Knowledge of their Relations as Probable Cause and Effect," Dr. D. R. Silver, Sidney; "The Surgery of Peritonitis," Dr. George M. Todd, Toledo; "Wounds and Injuries of the Eye," Dr. F. G. Steuber, Lima; "Paranoia," Dr. A. J. McCracken, Bellefontaine; "The Present Status of Diagnosis by Means of Tuberculin," Dr. Louis A. Levison, Toledo; "Bone Disease; (a) Osteo Myelitis (b) Tuberculosis," Dr. C. D. Selby, Dr. Charles W. Moots, Toledo; "The Dignity of the County Medical Society," Dr. Dana O. Weeks, Marion; Address, Dr. W. H. Snyder, President of the Ohio State Medical Association.

ANNUAL DINNER.

Address on Surgery—"Surgical Operations in Handicapped Patients," George W. Crile. Address on Medicine—"Observations on the Practice of Medicine in Foreign Lands," Martin Stamm.

Thursday Morning—"Otorrhoea; Its Significance and Treatment," Charles Lukens, Toledo; "Hydrocephalus," Harry A. Lewis, Continental; "The Surgery of Cleft Palate—with Cases," J. H. Jacobson, Toledo; "Appendicitis—Differential Diagnosis," W. W. Hamer, Bellefontaine; President's Address, Thomas Hubbard; "Solid Carbon-Dioxide in the Treatment of Birth

Mark, with Presentation of Cases," Jeremiah Metzger, Toledo; "Gall Stones," W. D. Hamilton, Columbus; "The Clinical Value of a Test Meal," G. W. Smeltz, Bryan.

THE VALUE OF TOLERANCE DETERMINATIONS IN THE DIAGNOSIS OF URIC ACID PERVERSIONS.

ALFRED C. CROFTAN, CHICAGO, ILL.

[Author's abstract of an address delivered before the Toledo Academy of Medicine.]

The early diagnosis of so-called uric acid lesions is exceedingly uncertain and vague and many patients are truly gouty before any of the numerous clinical syndromes that are attributed to uric acid perversions make their appearance. For this reason tolerance determinations of the character to be presently described are of the greatest practical importance.

Vague pains in muscles, nerves and joints, often due to masked inflammatory rheumatism, in an individual perchance excreting a large amount of uric acid are often falsely interpreted as gouty. In any such doubtful case a preliminary attempt should always be made to dispel the trouble by the administration of sufficient large doses of antipyrine or salicylic acid (75 to 150 grains of sodium salicylate a day). In wrongly interpreted tabetic, luetic, rheumatoid lesions errors are especially unfortunate as diet restrictions, watering cures, bath cures, etc., all intended to correct uric acid perversions so often falsely instituted. In none of these processes are urate deposits primarily found in the joints, nor is there any other evidence of a perversion of the uric acid metabolism.

It is well to remember on the other hand that gout, not necessarily in its most typical form, is much more frequent in this country than is commonly believed; it will be discovered quite often if a study of the uric acid metabolism as described below is undertaken.

Of the underlying causes of the uric acid diathesis we know nothing definite. We do know, however, of certain definite changes in the uric acid metabolism (secondary no doubt to some unknown primary cause or causes) that are quite characteristic and that must be understood. In speaking of the uric acid excretion there must be always included the so-called xanthin bases (or purin bases or alloxuric bases) the two forming together the group of purin bodies (or alloxuric bodies). At one time it was thought that in the uric acid diathesis there was a deviation from the normal in the relative excretion of uric acid and of the xanthin bases in the sense, namely, that there was a relative increase in the excre-

tion of the xanthin bases with a relative decrease in the uric acid excretion. It was also believed that the xanthin bases were the toxic element that produced the lesions in the so-called uric acid diathesis. This view has never been completely upset and it has much about it that is attractive. At all events in speaking of the uric acid excretion, it must be remembered that ten to twelve per cent. of the excreted purin nitrogen consists of xanthin bases; the source of both these bodies being nuclein, derived either from the cells of the body tissues or from the food.

In studying any case of the uric acid diathesis, it is important to distinguish between the endogenous and the exogenous uric acid.

The *endogenous* uric acid being the portion that is excreted when all uric acid forming pabulum is excluded from the diet; in other words, it is the uric acid that is derived from the nuclei of the body cells. The endogenous uric acid excretion is determined by placing the subject on a purin-free diet (see below) and determining the uric acid excretion for several days in succession until fairly constant values are reached, equal to .04 to .045 grammes in a normal adult per diem. This excretion is a *constant* factor that is apt to vary, however, in each individual. It can be slightly increased by the administration of salicylates, of thymic acid and of saline mineral waters; slightly depressed by alcohol. In certain pathological conditions, of course, in which there is much nuclear degeneration, the value for the endogenous uric acid becomes greatly increased. I refer, for instance, to febrile diseases with leucocytosis, to leukemia, especially after the use of the X-ray, to severe cases of diabetes, etc.

The *exogenous* uric acid excretion is derived from the nucleins and purins introduced in the food; of the latter a part is always transformed to urea, another part converted into uric acid and eliminated as such in the urine. The nuclein of the food as it enters the intestine is split into albumin and nucleinic acid. The latter undergoes bacterial fermentation and together with the nuclein derived from desquamating intestinal epithelia forms the purin content of the stools. Part of the nucleinic acid is absorbed and becomes disintegrated within the cells by a special ferment called "nuclease." Only about fifty per cent. of the calculated uric acid appears in the urine. The rest is destroyed or transformed into urea. The exogenous uric acid excretion is not a constant factor; but altogether fluctuating and directly dependent upon the purin intake.

It becomes apparent from what has been said that one can never draw conclusions in regard to

the uric acid economy of the body from the urinary uric acid, unless the endogenous uric acid factor is known for each individual and unless the purin content of the food is carefully included in the calculation.

In the uric acid diathesis we can determine the existence of the following abnormalities; the values of endogenous uric acid are low; the excretion of exogenous acid is insufficient and very much retarded, that is, only one-third to one-half of the calculated amount being recovered within normal time, the circulating uric acid values are high; acute gouty attacks are accompanied by an immense increase in the uric acid excretion, signifying a cleansing of the body of retained uric acid. In other words we are dealing with a chronic uric acid retention interrupted by an occasional critical outpouring of uric acid, accompanied by local inflammatory and general toxic symptoms.

These physiologic preliminaries enable us, first, to render the diagnosis of the uric acid diathesis more positive, second, to determine the tolerance of gouty subjects for purin bodies and to regulate treatment accordingly.

In attempting a diagnosis in cases suspected to be afflicted with manifestation of the uric acid diathesis, one must first determine the endogenous uric acid excretion, that is, the individual factor; one must secondly add a definite quantity of purins to the food and see whether the uric acid index in the urine is low, hence the uric acid metabolism presumably perverted, then the patient may be called gouty. In other words, contrary to ordinarily accepted ideas one finds in gout not a urinary increase of uric acid, but rather a decrease.

Therapeutically tolerance determinations are valuable chiefly because they show how much of valuable purin can be safely given while still remaining within the limits of safety; and without chronically underfeeding the patient. It is hard to avoid the latter danger, if purins, as is so commonly done, are completely excluded from the diet. We are dealing here with conditions exactly similar to those obtaining in diabetes. In very severe cases of the uric acid diathesis the complete withdrawal of purin containing food, as in diabetes of carbohydrate food, is, of course, occasionally a useful temporary expedient.

In most cases it will be found, however, that there is left some power to properly assimilate purins and this power should be utilized. Danger from purin containing food does not begin to arise for these sufferers until the boundary of tolerance is overstepped. One can also no doubt increase this boundary of tolerance as in diabetes

by proper "exercise and rest" of the purin metabolism.

What are purin-free, what purin-containing foods?

Purin-free are, first, the products of female mammals and birds, namely, milk and its derivatives, eggs, caviar. (In the case of cheese, particularly if it contains many bacteria, one should be careful on account of the nuclein content of the latter); second, practically all vegetables. Some of the latter are completely purin-free, namely, sugars, vegetable oils, leaves, roots, stalks. Seeds, especially of germinating plants (plant embryos) contain some nucleins; hence, in very severe cases of gout, peas, lentils, beans, whole wheat are best forbidden. There is never, however, any objection to flour made from these seeds, for in process of sifting the germinal part is removed. Among the plant products coffee, tea and cocoa contain purin bodies, but none of them contribute to uric acid formation, hence small quantities of these beverages may be permitted.

Purin-containing are all animal tissues. The more cell nuclei in a given volume of animal tissue the more harmful the particular food. For this reason internal organs should be completely excluded from the diet. For the same reason, the flesh of young animals is more deleterious than that of old. There are no differences between light and dark meat.

Very important is the method of preparation. In roasting meats, the purin bodies are retained on account of the impermeable coating that immediately forms on the outside of the roast. In raw and rare meats the purin bodies are still present. The best method of preparation, therefore, is broiling or stewing, for by these processes most of the purin bodies are withdrawn. Per contra meat gravies, bouillons are particularly bad, as they are essentially extracts of purin bodies. Corn beef is not particularly bad, as most of the purin bodies have been leached out.

Alcohol is especially deleterious in this disease for it renders the elimination of uric acid slower.

Mineral waters contrary to common prejudice have little effect on the uric acid elimination. A course of mineral waters is beneficial in the uric acid diathesis on account of its good effect upon the dyspepsia, constipation, hepatic insufficiency, gall duct, catarrh, etc., that are so often present, and on account of the rest and respite from the routine that a sojourn in a watering place usually entails. As a matter of fact it is well known that gouty attacks often come on at once when a so-called cure is begun. It appears that most min-

eral waters cause some retention rather than elimination of uric acid.

This does not apply to nephrolithiasis urica; here, however, the uric acid excretion is normal, the disturbance lying in impaired solubility of uric acid and urates in the urine. It is of value here too to depress the urinary acid excretion by reducing the purin-intake; and the administration of alkalis no doubt reduces the tendency of urinary urates to precipitation and the formation of urate concretions in the urinary passages. Sufferers from gout or the uric acid diathesis should however never be placed permanently upon alkalis. In fact, the best method of treating these patients is not to give the alkalis, but exactly, on the contrary, hydrochloric acid; for the latter apparently loosens uric acid from its connections, mobilizes it, throws it into the circulation and in this way favors its elimination and transformation into innocuous excretory end products.

SIXTH DISTRICT

FRED W. HUTCHINGS, M. D., Collaborator.

Officers of the Ashtabula County Medical Society for 1910: President, F. E. Tibbits, Geneva; Vice President, B. C. Eades, Conneaut; Secretary, L. C. Stiles, Austintown; Treasurer, A. W. Hopkins, Ashtabula; Censor, F. D. Snyder, Ashtabula; Delegate to State Convention, O. A. Dickson, Jefferson; Alternate, C. E. Case, Ashtabula.

At the annual meeting of the Academy of Medicine of Cleveland held the 17th inst., the following officers were elected: President, Charles B. Parker; Vice President, F. C. Taylor; Secretary, O. A. Weber; Treasurer, W. S. Hobson; Trustees, J. J. R. Macleod and M. J. Lichty.

The sixty-fifth regular monthly meeting of the Lake County Medical Society was held at the Cowles House, Painesville, Ohio, Monday evening, December 6, 1909. The program was as follows: Minutes of last meeting and election of officers for 1910; miscellaneous business and payment of special assessment and annual dues; presentation of cases; paper by John N. Leuker, of Cleveland, on "Symptoms and Treatment of Acute Mastoiditis."

FIFTH DISTRICT

A. J. MARCH, M. D., Collaborator.

The Portage County Medical Society met at Ravenna, December 9. The program was as follows: Minutes of previous monthly meeting; communications and miscellaneous business; "In-

fant Feeding," by B. H. Nichols; discussion opened by L. A. Woolf, followed by Drs. Andres, Jaster, Miller, Widdecombe, Waggoner, White, Dyson and Jacob.

T. Clarke Miller visited the society and gave a very instructive talk on organization work of the State Society and the Ohio State Medical Journal.

Dr. Nichols' paper brought out many interesting points; he stated that country children suffered more than those of the cities on account of the general unsanitary milk conditions, whereas, in the larger cities certified milk is obtainable, and the value of inspectors for milk producing cattle was emphasized. Following the meeting a banquet was tendered to the society by W. W. White.

SEVENTH DISTRICT

S. O. BARKHURST, M. D., Collaborator.

The following officers were elected for the year 1910 by the Tuscarawas County Medical Society: President, J. A. McCollam, Urichsville; Vice President, W. R. Hosick, Newcomerstown; Treasurer, E. D. Moore, New Philadelphia; Secretary, George Tracy Haverfield, Urichsville; Censor, for three years, D. W. Shumaker; Essayist for State Meeting, D. W. Shumaker; Member of Legislative Committee, C. U. Patterson.

A report of the meeting of the State Auxiliary Committee on Public Policy and Legislation, in Columbus, November 17, was given by J. A. McCollam, and was fully discussed by the society.

The following paper was read by C. U. Patterson: "Six Years Under the New Organization; Medical Ethics Reviewed; What Shall We Do to Promote the Growth and Interest of the Society."

Following this paper the members of the society were entertained at supper by the Post-Graduate Club. The program was as follows:

"Differential Diagnosis of Smallpox," by S. B. McGuire; "Bacteriology of Scarlet Fever; of Smallpox," read by E. D. Moore; "Prevention of the Spread of the Exanthemata; Vaccination and Quarantine; Treatment of the Patient; Disinfection," J. E. Groves.

The Monroe County Medical Society met December 6. I. J. Quimby and A. C. Archer, of Wheeling, West Virginia, addressed the society. The former on "Radiographic Diagnosis," and the latter on "Orthodontia." The dentists met with the society by special invitation.

The Jefferson County Medical Society met December 14. The following was the program:

Clinical Cases, by the Society; Reports of Clinical Cases, by the Society; "Complications of Gonorrhea," S. J. Podlewski; "Serum Treatment of Gonorrhea," J. C. M. Floyd; "Treatment of Chronic Gonorrhea," M. Gregg; "Treatment of Gonorrhea with Medical Bougies," Jos. Robertson.

NINTH DISTRICT

S. P. FETTER, M. D., Collaborator.

The Hempstead Memorial Academy of Medicine met in regular monthly session in Portsmouth, December 13, 1909, at 2:15 p. m., with the president, C. F. Kline, in the chair, and the following program:

"Early Diagnosis and Treatment of Acute Catarrhal and Purulent Otitis Media," G. A. Sulzer. Discussion opened by F. H. Williams. "The Relation of Nasopharyngeal Diseases and Obstructions to Diseases of the Ear," G. M. Marshall. Discussion, J. S. Rardin. "The Symptomatology and Diagnosis of Acute Mastoiditis," W. G. Cheney. Discussion, J. B. Ray.

TENTH DISTRICT

FRED FLETCHER, M. D., Collaborator.

At the regular meeting of the Columbus Academy of Medicine the following papers were read: "Pernicious Anemia," G. M. Waters; discussion by Drs. Kinsman, McGavran, J. D. Dunham, Upham, Deuschle and LeWald. "Removal of the Cataractous Lens Within Its Capsule," by J. W. Wright; discussion by Drs. C. S. Means, Brown and Timberman. V. A. Dodd reported a case of intussusception in a child of one year, and presented the specimen removed post-mortem. J. F. Baldwin presented the following pathologic specimens:

1. Spleen removed a few weeks before in a case of splenic anemia. Patient had just returned home in good shape.

2. Uterus, bi-cornus.

3. Uterus, uni-cornus, the missing horn being represented by a globular mass of uterine tissue to one side of the rest of the uterus, and connected with the ovary and tube on that side. This globular mass on incision was found to contain a cavity about the size of a buckshot. In both of these cases operation was rendered necessary because of pelvic inflammatory conditions; both patients making rapid convalescence.

4. Two pieces of small intestine from the same patient (a physician), one representing eighteen inches of bowel just above the ileocecal valve, and containing three distinct cancers; the other specimen representing about six inches of bowel

from the upper end of the jejunum, and containing one cancer, these four distinct growths being apparently of about the same age. Patient in the hospital, but convalescing rapidly. Very grave prognosis.

5. One-half of a lower jaw which had been removed from a child, having become detached as the result of osteomyelitis. It had been removed several months before, and was reported because of the complete reproduction of the bone. Motion of the jaw was absolutely perfect, and radiographic pictures of the two sides showed no difference except for the teeth.

6. An unusually large gall stone, about like a hulled butternut, which had been removed a few days before in a case of acute gangrene of the gall bladder, the peculiarity of the case consisting in the fact that close investigation failed to show the slightest history of any trouble from the presence of this stone, although it must have been in existence for many years.

7. A tooth removed from a dentigerous cyst.

8. An unusually large prepuccial calculus which had been present for at least eighteen years.

At the annual meeting of the Columbus Academy of Medicine, December 20, the following officers were elected: J. A. Van Fossen, President; E. W. Euans, Vice President; Fred Fletcher, Secretary-Treasurer; J. M. Thomas, Trustee, and V. A. Dodd, Delegate to the State Convention.

At a special meeting, December 22, J. H. Homan, of Berlin, Germany, read a paper on "Bad Neuheim, Its Treatment and Therapeutic Value."

BOOK REVIEWS

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By Arthur R. Edwards, A. M., M. D., Professor of the Principles and Practice of Medicine and Clinical Medicine, and Dean of the Faculty in the Northwestern Medical School, Chicago; Attending Physician to Mercy, Wesley Hospitals, etc. Second and thoroughly revised edition illustrated with one hundred engravings and twenty-one plates. Lea & Febiger, New York and Philadelphia.

Dr. Edwards has given us in the second edition of his Principles and Practice of Medicine, a complete and up-to-date treatise on the subject.

Two hundred and seventy-three pages are devoted to diseases of the nervous system. Considerable space is given to cerebral localization including the latest contributions to this subject, a knowledge of which is so important in the diagnosis of brain lesions. The chapters on diseases of the nervous system are explicit and as

complete as can possibly be made in a work of this kind, and the latest developments in pathology diagnosis and treatment are here presented.

The author has throughout the entire book given special attention to therapeutics, and a number of useful formulæ are included which are most practical for the general practitioner. The tables of differential diagnosis are convenient and will serve as useful aids to the busy physician.

A TEXT-BOOK OF GENERAL BACTERIOLOGY. By Edwin O. Jordan, Ph. D., Professor of Bacteriology in the University of Chicago, and in Rush Medical College. Octavo of 557 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1909. Cloth, \$3.00 net.

This is an excellent work for students or any one desiring a good practical working knowledge of bacteriology. The introductory chapters pave the way to a general understanding of the subject and then the common pathogenic micro-organisms are taken up in detail, with their morphologic, cultural and staining peculiarities; their agglutinative powers and serum therapy, etc.

The last few chapters of practical application are of interest. The work is well mounted and very well illustrated.

A MANUAL OF CHEMISTRY. A guide to lectures and laboratory work for beginners in chemistry. A text-book specially adapted for students of medicine, pharmacy and dentistry. By W. Simon, Ph. D., M. D., Professor of Chemistry in the College of Physicians and Surgeons, Baltimore, and in the Baltimore College of Dental Surgery; Emeritus Professor in the Maryland College of Pharmacy; and Daniel Base, Ph. D., Professor of Chemistry in the Maryland College of Pharmacy. New (9th) edition, enlarged and thoroughly revised. Octavo, 716 pages, with 78 engravings and 9 colored plates, illustrating 64 of the most important chemical tests. Cloth, \$3.00, net. Lea & Febiger, Philadelphia and New York, 1909.

An excellent work for students of medicine and one which has received continued approval through eight preceding editions.

The style is clear and concise, the illustrations numerous and helpful to the text, and in every way this edition should merit and carry on the popularity of its predecessors.

A TEXT-BOOK OF PROTOZOOLOGY. By Gary N. Calkins, Ph. D., Professor of Protozoology in Columbia University, New York. Octavo, 349 pages, with 125 engravings and 4 colored plates. Cloth, \$3.25, net. Lea & Febiger, Philadelphia and New York, 1909.

The great importance of protozoa in relation to disease has been thoroughly demonstrated in re-

cent years, and therefore this book will be a welcome addition to our literature. The author has systematically presented the subject up to date, giving not only his own observations, but thoroughly covering the current writings.

LEGAL MEDICINE AND TOXICOLOGY. By R. L. Emerson, A. B., M. D. (Harvard), Member of the Massachusetts Medical Society. Formerly Instructor in Physiological Chemistry, Harvard Medical School, etc. D. Appleton & Co., New York and London.

This is an excellent book of reference for practitioners of all departments of medicine, but especially those in general medicine. It is concise and clear, and for a work of a single volume, is very comprehensive. The exigencies of the practice of medicine today demand that a man familiarize himself with many of the points well brought out by Dr. Emerson, and for this purpose this work is thoroughly adapted.

TUBERCULOSIS. A treatise by American authors on its etiology, pathology, frequency, diagnosis, prognosis, prevention and treatment. Edited by Arnold C. Klebs, M. D., with three colored plates and 243 illustrations. D. Appleton & Co.

This treatise stands in the front rank among the many useful and practical works recently written on tuberculosis. The contributors are men who are well recognized as authorities in the various phases of the subject, and the book throughout is well written and clearly illustrated. The X-Ray plates by Dr. Lewis Gregory Cole, of New York, are deserving of special attention as a proof of the great aid the skiagraph may be in the diagnosis and localization of tubercular lesions. Special attention has been given to the home treatment as well as sanatorium by a large variety of photographs and plans taken from the leading institutions devoted to the care of tubercular patients.

THE PRACTITIONERS' VISITING LIST FOR 1910. An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The weekly, monthly and 30-patient perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-patient perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil with rubber, and calendar for two years. Price by mail, postpaid, to any address, \$1.25. Thumb-letter index, 25 cents extra. Descriptive circular showing the several styles sent on request. Lea & Febiger, Publishers, Philadelphia and New York.

THE PHYSICIAN'S POCKET ACCOUNT BOOK. By J. J. Taylor, M. D., bound in full leather, 24 pages of practical instructions for physicians, 216 pages of accounts. Price, \$1.00 per copy. Published by The Medical Council, 4105 Walnut St., Philadelphia, Pa.

This book is without a doubt one of the most complete and at the same time simple and thoroughly efficient account books that has ever been devised. Furthermore, it is absolutely legal and can be presented in any court of justice. It does not make use of any hieroglyphics, but everything is entered in plain language, and any judge can understand it.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS. With especial reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, M. D., Professor of Therapeutics in the Jefferson Medical College of Philadelphia. Thirteenth edition, thoroughly revised. Octavo, 951 pages, with 122 engravings, and 4 full-page colored plates. Cloth, \$4.00, net; leather, \$5.00 net; half morocco, \$5.00, net. Lea & Febiger, Philadelphia and New York 1909.

The author's conception of his subject is the broadest possible. He considers all varieties and methods of treatment with their indications and limitations. He describes the newer developments and gives clearly and concisely the technic where it would be of value. Illustrations are added whenever especially helpful and are well chosen and of good quality.

It will continue in good measure the popularity of Dr. Hare as a medical author and of this book so long established by the preceding editions.

PROCEEDINGS OF THE AMERICAN ASSOCIATION OF MEDICAL MILK COMMISSIONS. Third annual edition.

A bound volume of 152 pages containing the numerous excellent papers presented at the meeting, together with reports of nineteen milk commissions, the reports of officers, committees, etc., making an attractive book presenting the status of the milk problem up to date. It is gratifying to note from the reports and papers the excellent progress which is being made.

TREATMENT OF DISEASES OF CHILDREN. The new (2d) edition. By Charles Gilmore Kerley, M. D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, etc. Second revised edition. Octavo of 629 pages, illustrated. Philadelphia and London; W. B. Saunders Company, 1909. Cloth, \$5.00 net; half morocco, \$6.50 net.

For the physician experienced in the diagnosis of children's diseases this book will be of great

value. Able suggestions for the education of the mother in the care of her child, prophylaxis, infant feeding, the treatment and management of the diseases of the infant and child are fully discussed. Vague terms that so often are seen in the text-books, such as "Treatment Along Supportive Lines," "Treatment According to the Indications of the Case," etc., are eliminated or defined. But symptomatology and diagnosis are too often merely hinted at and too frequently entirely omitted to make this work advisable for the undergraduate medical student, unless used in conjunction with one of the more complete text-books.

MINOR OPHTHALMIC AND AURAL TECHNIQUE. A short treatise dealing with minor procedures about the eye and ear. Adapted to the use of those requiring a comprehensive knowledge of this subject. By Alfred Nicholas Murray, M. D., Chicago, Assistant in the Department of Otology and Laryngology, Rush Medical College, etc. With 98 illustrations in the text, reproduced from photographs and original drawings. 1909, Cleveland Press, Chicago.

This is a well mounted and exceedingly well illustrated work of considerable practical value. It is clearly written and in its attention to the minor details will appeal especially to students, post-graduates in attendance and dispensaries, and general practitioners who are compelled often to treat minor conditions.

MEDICAL SOCIOLOGY. A series of observations touching the sociology of health and the relations of medicine to society. By James Peter Warbasse, M. D., Surgeon to the German Hospital, etc. D. Appleton & Co.

This work consists of a number of essays on medical and health topics which will be of interest not only to the broader physicians, but also to students of sociology and others of the laity who wish to learn many of the problems which confront society. One may not agree with all that is said, but the author has well considered and presented his views.

A MANUAL OF OTOTOLOGY. By Gorham Bacon, A. M., M. D., Professor of Otology in the Coll. of P. and S., Columbia Univ., New York. With an introductory chapter by Clarence J. Blake, M. D., Professor of Otology in the Harvard Medical School, Boston. New (5th) edition, thoroughly revised. 12mo., 500 pages, 147 engravings and 12 plates. Cloth, \$2.25, net. Lea and Febiger, Philadelphia and New York, 1909.

The appearance of a fifth edition of this work is evidence of its continued popularity; some old material has been eliminated and the later de-

velopments added, so that the subject is well covered and still the book kept down to almost the same medium and convenient size of its predecessors.

THE ORIGIN AND PREVALENCE OF TYPHOID FEVER IN THE DISTRICT OF COLUMBIA. Hygienic Laboratory, Bulletin No. 52.

An exhaustive study of this disease as occurring in the city of Washington, with investigations of the etiology, distribution, social influences, effects of age, sex, nationality, etc., profusely illustrated by maps and charts. This is an important contribution to our knowledge of typhoid fever, and illustrates what could be accomplished by a national department of health with appropriate powers.

NEWS NOTES

K. S. West and A. B. Howard, Cleveland, are in Europe.

W. H. Beggs, Columbus Grove, was elected president of the board of trustees of the Toledo State Hospital.

Byron Stanton, Cincinnati, has succeeded Louis Schwab, mayor-elect, as medical director of the Cincinnati Hospital.

Louis Schwab was elected mayor of Cincinnati; J. M. Withrow, a member of the board of education, and H. J. Cook, a member of the city council.

At the December meeting of the Toledo State Hospital Board, George R. Love, Republican, was reappointed superintendent of the asylum for four years.

B. F. Syman, who recently located in Springfield, specializing in nose and throat, has given up his practice and gone to Colorado on account of his health.

Dr. Hugh A. Baldwin has removed his office from the Grant Hospital to 347 East State street, Columbus, Ohio. Practice limited to diseases of the genito urinary tract and venereal diseases.

J. A. Link, of Springfield, who has spent the last year in Europe in doing post-graduate work

in surgery, has returned and resumed his practice. Dr. Link, while abroad, made a special study of orthopedic surgery.

Walter C. Taylor, who has been sick in the Springfield City Hospital the last few months, and who has since been taking a vacation while recuperating, has resumed his practice and is now located in the new Fairbanks Building.

W. A. Ort and C. W. Russel, of Springfield, have returned from Rochester, Minn., where they attended the clinics given by the Mayo Brothers. W. A. M. Hadley went as far as Chicago with them, where he attended clinics in eye and ear.

F. A. Hartley, formerly practicing in Union county, has located in Springfield, and is taking up eye, ear, nose and throat work. Dr. Hartley spent two years in post-graduate work in Philadelphia and in Vienna. He is located in the Fairbanks Building.

Isaac Kay, of Springfield, celebrated his eighty-first birthday anniversary in December. He went to his office as usual. Dr. Kay graduated in the Starling Medical College in the year 1849, and has been in practice ever since. Last spring Dr. Kay celebrated his sixtieth year in practice.

NEW BUILDING FOR THE CLEVELAND STATE HOSPITAL.

The board of trustees of the Cleveland State Hospital has asked for an appropriation of \$150,000 with which to erect a new building which will have accommodations for about two hundred additional patients. The present buildings of the institution are much overcrowded.

MEDICAL RESEARCH SOCIETY ELECTION.

At the annual election of the Cincinnati Society for Medical Research, the following officers were elected: President, Paul Wooley; Vice President, William Wherry; Secretary-Treasurer, Jacob L. Tuechter, and Executive Committee, Sidney Lange and Joseph Ransohoff.

The Clark County Medical Society has taken up the post-graduate course as suggested and outlined by the journal of the American Medical Association. The society meets every Monday night and there has been a very good attendance as well as lively discussions. P. E. Cromer and E. A. Hartley have joined the society.

The Nobel prize for medical research was this year conferred on Theodor Kocher, of Berne, where he has been professor of surgery since 1872. The prize in medicine has been awarded in turn during the nine years since the foundation of the Nobel prizes to Von Behring, Ross, Finsen, Pawlow, Koch, Golgi, Cajal, Laveran, Ehrlich and Metchnikoff.

"Dr." George H. Shubert, who was arraigned before Judge Geiger on the charge of illegal practice of medicine in Springfield without a license, and who entered a plea of not guilty withdrew his former plea in probate court and changed it to guilty. Upon this action he was given a fine of \$25 and costs which he paid and was released.

TROPICAL MEDICINE.

The New York Post-Graduate School is establishing in its new buildings a full equipment of wards and laboratories for the teaching of tropical medicine. The department is being conducted under the co-operation of the U. S. Army, Navy and Public Health services, who detail officers from their respective medical corps to assist in the conduct of the laboratory and clinical courses.

THE OHIO VALLEY MEETING.

The eleventh annual meeting of the Ohio Valley Medical Association was held in Evansville, Ind., November 10, 11 and 12, under the presidency of Dr. Curran Pope, Louisville, Ky. The following officers were elected: President, Albert E. Sterne, Indianapolis; Vice Presidents, G. Frank Lydston, Chicago, William D. Haines, Cincinnati, and Louis D. Brose, Evansville, Ind., and Secretary-Treasurer, Benjamin L. W. Floyd, Evansville, Ind. It was decided to hold the next meeting in Evansville.

THE AMERICAN HOSPITAL OF PARIS

at 55 Boulevard du Chateau, Neuilly, was opened on November 13. The board of governors consists of John H. Hardjes, president, John J. Hoff, vice president, H. H. Hardjes, treasurer, and Henry Cachard, secretary. The attending physicians are: A. J. Magnin, Edmund L. Gros, C. Crosby Whitman, and R. H. Turner. DuBoucher is attending surgeon, G. J. Bull is attending oculist, and C. J. Koenig is attending otologist.

DEATHS

T. M. Carroll, of Springfield, who has been a practitioner there for twenty-five years, but who of late has not been engaged in active practice, died in Springfield on the eighth of December. Dr. Carroll graduated in the Ohio Medical College at Cincinnati.

D. H. Deckwith, Electric Medical Institute, Cincinnati, 1849, died at his home in Cleveland, November 19, aged eighty-four.

A. M. Pherson, Miami Medical College, 1876, died at his home in Osborn, October 7, from angina pectoris, aged sixty-two.

J. W. Ringer, University of Michigan, 1895, died at his home in Cambridge, December 14, from Bright's disease, aged sixty.

W. Van Bergen Ames, for years a practitioner, died at his home in Fremont November 6, from senile debility, aged eighty-eight.

S. M. Kelso, Jefferson Medical College, 1868, died at his home in Xenia, October 17, from cardiac disease, aged seventy-one.

George Mitchell, one of the oldest medical practitioners of Mansfield, died December 17, aged seventy-two years, after a brief illness. He was a civil war surgeon, a trustee of Ohio Wesleyan University for over twenty-five years, a trustee of the Columbus State Hospital during its construction, lecturer at the medical department of Wooster University at Cleveland for a number of years and served three terms as pension examiner in his home city.

Milton Smith Pixley died at his home in Portsmouth, Ohio, November 29. He was born near Wheelersburg, Scioto county, in 1842, began the study of medicine in 1861 under Dr. Joseph Corson, Portsmouth, and in the same year entered Medical College of Ohio at Cincinnati. In August, 1863, he entered the 91st O. V. I. as hospital steward and served until July, 1865. During winter of '65 and '66 he attended Miami Medical College and was graduated in 1866. He located

in Catlettsburg, Ky., remaining there but one year, coming to Portsmouth in '67, remaining in Portsmouth and in active practice until his death.

Dr. Pixley was one of the early members of the Scioto Medical Society which was formed in '62 and which became the Hempstead Memorial Academy of Medicine in '82. He has ever been an earnest, able and indefatigable worker in behalf of an organized, co-operative profession. His career has been characterized by rigid adherence to the purest principles of professional and civic ethics, himself a man always of such courteous and kindly personality as to inspire a profounder regard for the bonds of professional fellowship. His memory is held in deep reverence by the members of the Hempstead Memorial Academy of Medicine, for by his faithful interest and efforts, together with others of his older professional associates the local academy of medicine has been enabled to attain the enviable record of an uninterrupted existence of almost a half century. He has served faithfully in every office of the academy. For twenty-one years the meetings were held in his private office building. Dr. Pixley is one of the last of the old pioneer practitioners of this vicinity, of that body of men whose noble careers and professional attainments we point to with pride.

RESOLUTIONS OF RESPECT.

At a called meeting of the Hempstead Memorial Academy of Medicine held November 29, 1909, the following resolutions were adopted:

It is with great regret and a sense of personal loss that we chronicle the death of our beloved friend and brother, Dr. Milton S. Pixley. The medical profession has lost one of the most valued members and our city one of its most noble citizens.

Therefore be it resolved that we recognize in our departed brother traits of sterling character and moral integrity worthy of emulation.

In this hour of bereavement we would extend to his family and relatives our deepest sympathy, knowing that in the death of Dr. Pixley the Hempstead Academy of Medicine has lost one of its truest and staunchest members and each of us mourn the loss of a constant friend and brother in our calling.

Be it further resolved, that a copy of these resolutions be presented to his family and also tendered our city papers for publication and spread upon the minutes of our society.

Further that our hall be appropriately draped for a period of thirty days.

A. R. MOORE,
S. B. MCKERRIHAN,
P. J. KLINE.
Committee.

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ORIGINAL ARTICLES

HEART TONES AND HEART MURMURS.

JOHN E. GREIWE, M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

In order to appreciate phenomena arising from an organ no longer functioning in a normal manner, it is necessary above all else to understand the normal physiology of that particular part. The study of pathological physiology presupposes our knowing definitely normal physiology.

With reference to the heart we must admit that our observations of its abnormal action have not only stimulated us in our analysis of the heart circle, but it seems more than probable that we have cleared up many of the doubtful points in the normal circulation by study of diseased conditions.

In a study of the heart tones and heart murmurs it is necessary to have a correct appreciation of the method of closure of the valves, as well as of the time at which these valves close. The relation of the apex beat of the heart to the time of closure and its relation to ventricular systole are matters of the greatest importance in a study of the normal, and more particularly in our estimation of the pathological physiology of the heart.

I place the subject in this manner in my short paper in order to bring to your notice at once what I consider essential, and furthermore because the proper appreciation of these points is so important in our examination of the heart, and in our appreciation of the real meaning of increased arterial tension.

We have for so many years been accustomed to read in the text-books of physiology that the first tone of the heart is due to muscular contraction, closure of the mitral and tricuspid valves and resistance in the conus arteriosus, that for a long time it seemed almost suicidal to question such statements. Nevertheless, since the estimate of blood pressure in the arterial

system has become so important in our analysis of a given physical condition, we have gone back to the fundamental principals of physiology, and we are led to examine more closely into the subject of intra ventricular pressure.

Let me remark here that in my judgment we must abandon the old ideas that the closure of the auriculo-ventricular, as well as the semi-lunar valves, is that of a clap-trap arrangement, because such a closure would necessarily mean a regurgitation to some degree at least in the normal state. That such a sudden closure takes place would seem to be contrary to all laws of pressure when applied to such a perfect mechanism as the human heart.

Because of the interest involved in this question I have taken time to look up works upon intra-cardiac pressure, and I find a most admirable exposition of this subject in a work by Collier published in London in 1889—"The Physiology of the Vascular System." So little attention has been given to this work by American authorities that I think it should be emphasized now, at a time when we are so absorbed with the pathological physiology of the circulation.

The sudden (and the term should be understood as a relative term) closure of the auriculo-ventricular, as well as the semi-lunar valves, would, as I believe, almost necessarily mean some leakage or escape of blood in the wrong direction. Every principal involved in the perfect mechanism of the heart speaks against such an escape of blood.

Again in order to bring this subject of the action of the valves, and what part they play in the production of the heart tones and the real meaning of the accentuation of the first and second heart tones more clearly before you, let me state what seems to me at present pretty definitely established facts.

First: The auricles have poorly developed muscular walls when compared to the same tissue in the ventricles.

Second: That part of the auricle known as the auricular appendix has extremely well developed muscular fibres and must therefore have

a special function with reference to the passage of blood from the auricle to the ventricle.

Third: The emptying of the auricles is due more to a suction action created by a dilating ventricle than to any great contractile power in the auricular walls.

Fourth: The action of the auricular appendix manifests itself at the end of auricular systole or at the end of ventricular diastole and it is engaged in driving under great pressure the last drops of blood into an almost completely filled ventricle.

Fifth: The auriculo-ventricular valves are gradually and steadily brought together during the diastole of the ventricle as this chamber is filling up. If this method of closure be admitted, it must be granted that the mere bringing together or closure of these tissues does not give rise to a tone appreciable on auscultation.

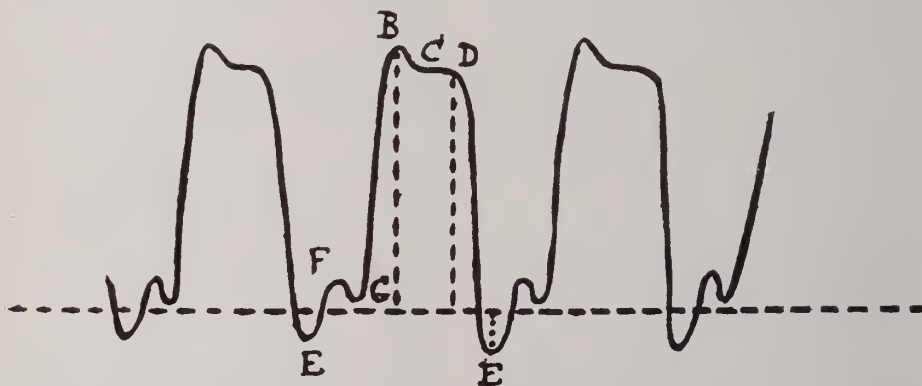
There is a time in the heart cycle when all the valves of the heart are closed, and in order to

of the lumen of this muscular tube as well as its strong muscular wall seems to indicate that this part of the auricle is actively engaged in forcing the last drops of blood from the upper into the lower chamber at a time when the valves are almost completely closed and when the ventricle is almost completely filled.

In Tigerstedts Text-Book of Physiology it will be noticed that the author still holds to the old teaching, that the closure of the mitral and tricuspid valves take part in the production of the first or systolic tone, whereas, it is stated distinctly that the second heart tone is produced by the sudden tension of the semi-lunar valves.

I am inclined to believe that we must hold the same opinion concerning the mitral and tricuspid valves, viz.: that it is not their closure which causes the tone, but the sudden strain or tension of the already closed valves which brings about the tone.

This view must be accepted if we admit a



INTRAVENTRICULAR PRESSURE CURVE
FROM COLLIER'S PHYSIOLOGY OF THE
CIRCULATION.

E—Beginning of ventricular systole. Immediately after F a drop, due to a yielding of auriculo-ventricular valves toward the auricle.

B—End of systole of ventricle; again immediately after C there is a slight rise in this line of descent, due to pressure of semilunar valves upon the small amount of blood in ventricle, i. e., a temporary rise of pressure.

appreciate this period of the heart cycle, it should be remembered that the pressure in the ventricles and in the beginning of the aorta and the beginning of the pulmonary artery are equal. We will get our most thorough appreciation of the meaning of blood pressure if we bear this period in mind. Remember also that this is the time when the ventricle is fullest and when the dilation of the ventricular cavities is greatest. I may say also, in passing, that this must be the period when the heart is largest.

I have spoken of the muscular tissue in the auricular appendix as enormously developed as compared to the rest of the auricle. Actual observation upon animals shows that this appendix contracts with great force at the end of auricular systole, in other words, the direction

period when all the valves are closed and if at the same time we admit that this period occurs just prior to systole of the ventricle.

Furthermore, an analysis of the intra-ventricular pressure curve proves the correctness of the position which I here hold, viz.: That the tone is not due to the closure, but it is produced by the sudden stretching of the already closed valves.

Before asking your attention to the charts showing the intra-ventricular pressure curve, let me remind you of the fact that the pressure in the ventricle may range from a -20 to a $+200$ or more. We must also bear in mind the all important fact that the ventricles never completely empty themselves. There is always a small amount of residual blood. We should further-

more bear in mind that the velocity of the current leaving the ventricle is greatest in the beginning of systole, whereas, the pressure is greatest at the end of systole. This means that the displacement in the aorta is greatest in the beginning, and that toward the end of systole the pressure in aorta and ventricle is so nearly alike that we must look upon the process at the very end of systole as one where just a few drops of blood enter the aorta and complete the work of distension of aorta and closure of the valves.

I shall here ask your attention to a drawing of the intra-ventricular pressure curve from the work of Collier.

We must bear in mind that the pressure is equal in all parts of this ventricular wall. Now comes the force of the ventricular contraction—naturally the weakest part of this wall is the one to yield first. It is evident that the weakest part of this wall is to be found above at the elastic valves at the auriculo-ventricular opening. These closed valves are put to a sudden strain, are ballooned upward and yield in the direction of the auricles. If this be the case, there must be some evidence of this fact in the line of ascent of the intra-ventricular pressure curve. Examine for a moment this line which represents a pressure of from -20 (below the atmospheric pressure) to a plus 200. You will notice that this is not an uninterrupted line of ascent, but that there is a sudden small but distinct drop in the pressure. The only rational explanation for this is to be found in the yielding of some part of the wall of this chamber, viz.: that part which is formed by the auriculo-ventricular valves. There results a temporary diminution of pressure (it always remains above the line of atmospheric pressure), then the rise is steady and sharp. But the important fact remains that there has been a yielding of a part of the wall at the beginning of ventricular systole. It is this sudden strain upon the closed valves, which in my judgment gives rise to the tone. It is distinctly systolic, whereas, the closure of the valves is diastolic in time. Follow this line of ascent of the intra-ventricular pressure curve, during which time a positive and ever increasing force is overcome in the first part of the aorta. This force exerts itself in all directions upon the first part of the aorta, upward, to the side, in the sinuses of Valsalva and also on the upper surface of the semi-lunar valves, with the result that the valves are gradually and not suddenly closed. All of this occurs during systole of the ventricle, so that as the pressure reaches its highest point there is room for no more blood—the last drops have been squeezed into the aorta between the

edges of the valves. Then comes a change of pressure in the ventricle, and as the pressure in the aorta becomes greater than the ventricular pressure, the already closed aortic valves are pressed backward upon the small quantity of residual blood, and here again there is a temporary and slight change in the line of descent, a temporary increase in the diastolic pressure. There must therefore be an indication of increase of pressure in the line of descent, and this again is shown in the drawing of the intra-ventricular pressure curve. This increase of pressure in the downward line occurs early—in fact at the very beginning of diastole of the ventricle. It is the time when the closed valves are pressed backward and experience the strain of pressure from the aorta, therefore not the time of closure, but at the beginning of diastole of the ventricle, and we have here an explanation of the production of the second tone, viz.: stretching of already closed valves. We thus have a better appreciation of a pathological phenomenon, viz.: increase in the second aortic tone. We should bear in mind a fundamental law in the study of heart affections, viz., the greater the difference in pressure on the two sides of the valve the greater the intensity of the tone.

To briefly summarize the conclusions from this short paper I may say that the first tone of the heart is due to muscular contraction, resistance in the conus arteriosus and the vibration of the closed auriculo-ventricular valves.

THE APEX BEAT.

Up to this very day there is no uniformity in teaching as to the cause or as to the time of the apex beat. The correct interpretation of this phenomenon from a clinical point of view is most desirable.

However, considering the newer light which has been thrown on this subject as the result of physiologic as well as clinical studies, we seem to be approaching a time when we can agree upon some phases of this important question.

I shall not even attempt to enumerate the many theories that have been advanced as to the cause of the apex beat of the heart. The theories which have met with considerable approval have been that the apex beat of the heart is due to the alteration in the form of the heart, next that it was due to a recoil resulting from a discharging body, and finally the view which is still held by the majority that it is due to the recoil and straightening of the aorta.

To put this subject briefly, for my time is exceedingly limited, let me say that all of these theories take it for granted that the apex beat

occurs at the time of the discharge of blood from the ventricle into the aorta. Let us consider here what are the various phases of ventricular systole and of ventricular diastole. Ventricular systole should be divided into

1. The time of closure (Time of increase of tonicity of the ventricular wall.)
2. The time of discharge of blood into the aorta or the pulmonary artery.

Diastole of the ventricle should be divided into the time of stretching or vibration of the semilunar valves; secondly, the time of filling of the ventricle; third, at the end of diastole of the ventricle, we have an active discharge of blood from the auricular appendix through the almost closed valves into a ventricle practically distended. It is to this last act before the beginning of ventricular systole to which I wish to call special attention as bearing an important relation to the time of the apex beat.

Observation upon the normal adult subject, and the result of clinical observation seem to prove definitely that the apex beat of the heart takes place during the period of closure and therefore in advance of the systolic discharge of blood into the large vessels. This would necessarily mean that we would have to abandon the theories that the apex beat of the heart is due to a recoil or to a straightening or lengthening of the aorta because these events occur during the second part of ventricular systole. The important element as I see it is, that there is increased tonicity of the ventricular wall occurring immediately after the auricular appendix has driven the last few drops of blood into a distended ventricle, resulting in a hardening of a chamber and a stretching of a auriculo-ventricular valve.

Let me state just a few facts. Physiologists admit that the heart lies at all times in contact with the inner surface of the chest. It must be admitted also that the complete filling of the ventricle will tend to render this contact more apparent. This complete filling occurs at the end of ventricular diastole. The impetus given to the ventricle by the last effort on the part of the auricle, more particularly the auriculo appendix, would seem to have an important bearing upon the change from diastole to the beginning of systole. We must all admit furthermore that the construction of a hollow organ would naturally tend to diminish the size of that organ, and in the case of the heart an active contraction of the ventricle would naturally have a tendency to diminish the contact with the chest wall. Martius has established the fact that it is the auriculo-ventricular groove which descends

during ventricular systole, whereas the apex of the heart tends to move away from the chest wall at a time when the blood is being discharged into the aorta. Now this descent of this auriculo-ventricular groove and the slight retraction of the apex of the heart occur during the second part of the ventricular systole, whereas the apex beat due to the sudden increase of tone in the distended ventricle occurs at the time of closure of the valves, namely, the first part of ventricular systole. Furthermore actual observation in pathologic cases, such as aortic stenosis, and in certain cases of aortic regurgitation, will allow us to appreciate these two phases of ventricular systole. We may here often note the distinct upheaval in the intercostal space, followed by a noticeable retraction due to the diminution and size of the ventricle during the time of discharge. We have here illustrated the time of closure and the time of discharge. Again, an important phenomenon may be noticed at times in certain cases of mitral stenosis, where the thrill, the so-called presystolic thrill, runs into the time of apex beat. I am furthermore inclined to look upon this presystolic thrill as the result of the functional activity to a large degree of the auricular appendix.

In view of the fact that I have taken up so much time on the subject of the cause of the normal heart tones, I may be pardoned for being very brief upon a subject which is better known, viz., the causes of heart murmurs. I take it that there need be no reason for discussing the ordinary systolic and diastolic bruits, due to obstruction or leakage at given orifices. I may be pardoned, however, for calling attention to the impure tones of sclerosis at the aortic orifice. It seems to me that in general we have not given them their proper weight, and that they may mean a slight stiffening, or a mild degree of increased tension. Very frequently on postmortem examination no apparent lesion is found where it might have been expected. This is especially true when during life there has been a manifest weakness of the muscular structure of the heart. This naturally leads to the interesting subject of anaemic bruits—or haemic bruits. We can readily understand the production of these functional bruits at the mitral orifice, because here we have not only a weakness of the circular muscular fibres of the ventricle, but also a yielding, a loss of tone of the muscular fibres surrounding the auriculo-ventricular orifice, and consequently a true leakage into the auricle during systole. I believe most authorities still hold the opinion that functional bruits are systolic in time. Generally this is true, but I have so

often heard bruits during diastole, which were not organic, so far as our methods of examination were able to show, that I have come to doubt the common teaching upon this subject. I believe there may be a yielding of the ventricular wall or a loss of tone of this part, so that the pulmonary and aortic orifices and the tricuspid orifice may be relatively affected at the same time, but not to the same degree, so that we may have systolic and diastolic bruits resulting from this loss of muscular tone.

I have repeatedly examined students who had neglected physical exercise for some time, and who, after a violent effort with the arms and trunk, showed a temporary interference with the flow of blood from the right auricle into the right ventricle. They repeatedly developed a diastolic bruit, referable to the tricuspid, this bruit disappearing after a few minutes of absolute rest.

I wish to call attention to a specimen which I obtained from one of my hospital cases, where besides a distinct aortic systolic bruit, we had also a well marked musical bruit. This musical bruit was so constant that I had frequent occasions to demonstrate it to my classes in bedside teaching. The bruit was generally systolic, but occasionally it was diastolic. I wish here to call attention to this at this time, because I believe that the varying character of the tone together with its distinct musical properties may possibly lead us to the proper differentiation of a musical bruit due to a band across the ventricle. I pass the specimen or rather the stereoscopic picture of the heart showing a distinct band across the left ventricle. I should like to add here that not all musical bruits which have been heard will show like conditions on postmortem examination.

It has been said that musical bruits, due to bands across the ventricle, are diastolic in time. While we may admit the truth of this in general, the case which I show here proves that the bruit may be systolic. Much will depend, in my judgment, upon the exact location of the band. I regard the case, which I illustrate by means of the steroscope, as a congenital abnormality.

I call attention also to a number of specimens showing various regurgitant and others showing obstructive lesions about the mitral orifice.

Of extreme interest to me have been those specimens showing enormous dilatation of the left auricle with thickening of the endocardium. I also desire to call attention to the relative insufficiencies of the tricuspid orifice, according to lesions of the left side of the heart.

DISCUSSION.

Dr. Greiwe: I will pass some specimens around which will speak for themselves. I call your attention particularly to one which shows a very decided change in the heart. This man was subject to pericarditis and aortitis. He had also a congenital band across the ventricle. In this case we had a typical musical bruit, systolic at times, and at other times diastolic.

I will call attention to a very rare specimen which contains a growth in the tricuspid valve, also various lesions of the mitral area both in the way of stenosis and insufficiency. Here we have two views of mitral stenosis, one from the ventricle and one from the auricle. This is very well shown in these two specimens.

In a number of views also I show various specimens of tubercular pericarditis. It is wonderful how many cases of chronic types of pericarditis are due to tubercular infection.

I do not know that I have anything further to add; I had hoped that the discussion would bring out some points with reference to the apex beat. We are all taught that the apex beat occurs during systole. That is true, but it occurs not at the time of the discharge of the blood from the ventricle to the auricle; it occurs at the first part of the ventricular systole when all the valves are closed. In the case of a patient in the Cincinnati Hospital we are able to demonstrate those two phases of ventricular systole. We can determine the apex beat and also the recession of the heart and the apex from the chest walls during systole. In such a case a diagnosis of adherent pericardium is apt to be made. In this particular case the heart is slow enough in its action to allow us to distinguish between the two phases of systole; first coming against the chest wall, then the contraction of the ventricle and discharge of the blood from the ventricle into the aorta. The two parts of ventricular systole are very easily here seen.

ON THE FACTORS OF SAFETY IN ABDOMINAL OPERATIONS.

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[Read before the Ohio State Medical Association.]

There is at present in simple abdominal operations, when unaccompanied by organic disease or infection, virtually no mortality, certainly not more than from one-half to one per cent. The routine operations referred to are such as benign tumors of the pelvic organs, simple appendectomy, uncomplicated cholecystotomy, simple gastro-enterostomy, and simple renal operations. Among 4181 abdominal operations performed by my associate, Dr. Lower and myself, 1353 were of this simple type, with approximately one-half per cent mortality, or one death in 200. The causes of death in this favorable group of cases are unforeseen and as yet uncontrollable factors, such as embolism, pneumonia, etc. Surgery

here has made an all but complete conquest. There is, therefore, but little profit in discussing this group.

The great work to be done in abdominal surgery is that of reclaiming the handicapped cases, e. g., cases complicated by organic disease, by hemophilia, by anemia, by jaundice, by general weakness from wasting disease, by infections, etc. These furnish our present surgical problems. The factors of danger in these cases are well known. In considering the factors of safety in the group of unfavorable risks we will not now consider such important subjects as the secretions, the excretions, the digestion, the circulation and the respiration, the preservation of the body heat, nor the avoidance of technical shock factors, we shall rather discuss certain general influences before, during and after operation.

Cases of cardiac insufficiency, of hypertension pulse from arterio-sclerosis, chronic bronchitis, pyelitis, asthma, obesity, rheumatism, gout, any many others may show a decided rhythmicity of their symptoms that some prior observation may permit the placing of the operation at an optimum period. Many patients have been handicapped by living conditions at home. Again, some patients reduced from repeated hemorrhages, from needless pain, from anxious households, from home cares, and indeed from many physical, pathologic and even sociologic causes may respond splendidly to a well organized hospital regime—a regime that can administer baths, massage, physiologic rest, diet, and the highest type of hygiene. I have found the tuberculous regime as to diet and fresh air excellent. During the pre-operative stay at the hospital the patient becomes accustomed to the hospital routine and is encouraged by seeing cheerful convalescents. Such pre-operative preparation is only applicable to the willing cases without urgency, and during manifest improvement. In many cases this augmented vitality alone may save the day. Rest of body and mind, added nourishment, water equilibrium, and an abundance of circulating blood may convert a drooping risk into one of rising strength. These patients, too, should be buoyed up by hope.

Operations in the presence of acute peritonitis present special problems. The principal factors of safety here are the limiting of the spread of infection, the management of the anesthetic and the augmentation of the resistance of the patient. Abundant clinical experience has shown that in acute infections pooling of the pus in the pelvis by means of posture is one of the most important factors. Hence, as soon as an acute abdominal infection is encountered the patient should at once be placed in the Fowler position and should

be kept in this posture during transference to the ambulance, during transportation to the hospital (Van Buren Knott), while carried to his bed or to the operating room, during the operation, and so to continue until he has reached his bed, and during his convalescence until at least a complete local immunity is established. That is to say, the patient should literally sit through the attack.

Spread of infection is also diminished by minimizing intra-abdominal tension incident to coughing and to vomiting. Another, and I am convinced an important factor in the advance of infection, is the avoidance of ether or chloroform anesthesia. To this point I will refer later. Still another factor in the prevention of the spread of the infection is the limitation of the size of the incision, and the extent of the visceral trauma in the course of the operation. While the factor of the Fowler position will do as much for one surgeon as another, the technical factor of the operation is individual.

A case of acute infection subjected to ether anesthesia often displays an exacerbation of all the symptoms of infection to a degree wholly disproportionate to the operative factor. Judging wholly from clinical experience I conclude that ether exerts a specific effect on the body resistance, permitting thereby a sharp advance in the infection—perhaps a sufficient advance in certain cases to turn the tide against the patient. For more than two years I have operated all acute infections under nitrous oxide and oxygen anesthesia. There is left in my mind not a doubt that the acute infections do better under gas anesthesia than under ether. The skillful administration of gas anesthesia is a special accomplishment which can be acquired only by one giving special attention and having a continuous and large practice.

This brings us at once to the anesthetic question. I venture to say that every one here will agree with me in the general statement that although great strides have been made in most of the branches of surgery, the progress in anesthesia is conspicuously slow. The system of interne anesthetizers must go. For more than two years I have had the service of a special anesthetist in the private ward service at Lakeside Hospital. During this period I have at last felt at ease as to the anesthetic. In the average operation in which the margin of safety is large, the patient's vitality may successfully resist all sorts of anesthetic incompetence but the handicapped case should not be expected to endure the additional handicap of malanesthesia. The combination of morphin, scopolamine and ether, or morphin, scopolamine, cocaine and nitrous oxide, or nitrous oxide and cocain, produce in certain

cases unexpectedly brilliant results. At this time I cannot go into details. It is in my opinion not well to depend upon a single anesthesia routinely given for all purposes.

The acute stage of the pyogenic infections complicating surgery of the abdomen are now so well controlled by the Fowler-Murphy treatment, in addition to the general care of the patient that there are relatively few deaths from this source. That is to say, there are very few deaths from the immediate overwhelming toxemia. There still remain, however, certain sequelæ, such as multiple abscesses among the coils of intestine, subphrenic abscesses, metastatic abscesses in the chest, empyema, pyelphlebitis, multiple abscesses of the liver, thrombo-phlebitis, and other sequelæ which become extremely serious because of the reduced condition of the patient, the difficulty of precise location, and the inaccessibility of certain of these. I have found that if in these infections the patients are put upon the full tuberculosis regime they do surprisingly well; namely, they are given the diet of the tuberculous and are kept out of doors as much as possible during the day and sleep on the veranda at night. The details of this regime demand a great deal of service from the hospital—extra nurses, extra orderly service—and in every direction the requirements are so great that a service must be particularly equipped to care for these patients. This regime is carried out in winter as well as in summer. In addition to this, we make cultures from the pus in all cases of infection at the time of primary operation. Vaccines are prepared, and should any of the above mentioned complications follow, a course of vaccines is added. In this manner we have seen the recovery in seven cases of pyelphlebitis, a record I have never before approximated. There is no doubt in my mind that by the combination of resourceful nursing, large veranda space and abundance of help, including a splendid orderly service, backed up by a good pathologist who is able to make the proper vaccines, a vast number of the cases that formerly died may be reclaimed. There is a class of cases in particular in which there is great difficulty in preventing the overwhelming toxemia. I refer to cases of obstruction of the bowels, particularly in advanced malignant disease, in which the obstruction is so frequently allowed to continue until complicated by infection and auto-intoxication. This condition added to the advanced years in which cancer is usually found combines to render these handicapped patients most difficult problems. When one is able to approach these cases before there is a febrile reaction the results are very good indeed. In

such cases a complete resection is made with immediate anastomosis. The danger, however, is in the cases in which there is infection or in which the intestinal contents have become extremely toxic. There is urgent demand for the relief of the obstruction; there is no time for building up; the patient is rapidly declining; the complete resection may be followed by overwhelming toxemia or infection. If temporary drainage is made we have later to deal with an infected wound when the resection of the carcinoma is made. These problems are too great in themselves to be discussed here at length.

In another group of handicapped patients there has been recently introduced a new factor of safety of great value. I refer to the anemic or otherwise feeble patients demanding surgical operations. For example, patients reduced by frequent hemorrhages, as in benign or malignant tumors of the uterus, chronic hemorrhage from the bowels, repeated hemorrhages from gastric or duodenal ulcers, essential hemorrhage of the kidney, hemorrhage from malignant growths in the bladder, from extra-uterine rupture, etc. All these forms of anemia due to hemorrhage may be almost uniformly reclaimed by direct transfusion of blood either prior to or during the operation. In cases of doubt, one may do the operation first. Not only is this of value in cases handicapped by the mere fact of loss of blood, but also in pathologic hemorrhage the direct transfusion of normal coagulable blood may in itself arrest the hemorrhage.

In another group of handicapped cases, those in which there is long continued suppuration or starvation by obstruction of the pylorus, or any long continued digestive disturbance or wasting disease, yet requiring an operation before recuperation can take place, the factor of safety may also be adequately supplied by the direct transfusion of blood. Unless complicated by certain organic diseases, there is almost no case in which a direct transfusion of blood will not so raise the vitality as to render an operation relatively safe.

DISCUSSION.

Rufus Hall: I want to commend the essayist on this very excellent paper and the self-evident facts in the management of these desperate cases that he has brought out. I feel very much embarrassed in opening the discussion of this paper, because Dr. Crile has covered every subject so thoroughly and so well, and made it so plain that one can hardly find a place where you could say anything that would differ from his judgment in the management of these cases.

In the division of group cases he very naturally says that in the uncomplicated cases there would hardly be a mortality in abdominal operations, and the mortality that does obtain is in the na-

ture of unforeseen accidents that occur in one-half of one per cent. Now when it comes to the management of the handicap cases, he has taken up each group and eliminated it, and made it so self-evident that one cannot differ from him in the management of these cases. I am sure that he has emphasized what was said yesterday in the way of anesthetics, that the time is here when the question of anesthetics should be more carefully discussed and considered by operators than heretofore, in general hospitals as well as in private hospitals, and he very justly emphasizes the fact that no one anesthetic ought to be selected all the time for all patients. The patients, the disease, and the anesthetic should be considered. I have been quietly going on for two or three years and didn't know that any one else had stumbled onto the idea that ether and acute infections don't work together, and I was more than delighted to have his endorsement of that fact. It is a well-recognized fact that there are a large number of factors to be considered when you consider the safety of the patient in an operation in these handicap cases. One should not neglect to carry out every detail of management—any one may lose a patient—and the doctor has emphasized all these so well that I feel I will only be taking up the time of the society to try to say anything further.

M. Withrow, Cincinnati: I am here not to arraign this paper for any sins of commission; I am here not to arraign it for any grave sin of omission, but I am here to call attention to what I believe is a general habit on the part of surgeons, and that is the habit of becoming general specialists in surgery; of doing everything that is possible to be done in every portion of the human anatomy requiring surgical treatment. In other words, I am here to make an appeal, short to be sure, in the interest of confining the surgeon's work to those things he is best trained to do, and which he can, therefore, do best. It seems to me that one of the most important factors of safety in abdominal operations is that the operation should be done by one particularly trained in abdominal surgery. The splendid and classical array of methods of securing safety that have been given in the paper, I am sure, appeals to everybody here, but I simply want to offer just one word, and that is that abdominal surgery, notwithstanding this one-half of one per cent factor of safety in uncomplicated cases, is still a thing not to be attempted lightly nor inconsiderately by the mere tyro. I heard yesterday of some abdominal surgery that is being done not far away without hospital training, without trained anesthetists, without trained nurses, without that sort of training that the medical profession of today owes to every man that comes within its surgical purview, and the statement of the surgeon after the operation was (there were ladies present): "Why, damn it, it doesn't seem possible to kill them." Now, gentlemen, let us have higher ideals. Let this factor of safety enter among us, and let this question of self-restraint in being able to hold our hands from things we cannot do well so impress us that conscientiousness in this direction shall be one of the most important of all the added factors of safety.

ACNE VULGARIS, WITH SPECIAL REFERENCE TO ITS ETIOLOGY AND TREATMENT.

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[Read before the Ohio State Medical Association.]

Acne vulgaris is one of the most frequent maladies met with in dermatologic practice; yet in spite of its frequency and accordingly numerous opportunities for its study, there exists quite a diversity of opinion regarding the real nature of the disease. And I am impressed that this disease does not generally receive the serious consideration it deserves, occurring as it does in young men and women at a period when they would wish to appear at their best, and which, unless intelligently and skillfully treated, is prone to run a very chronic course and terminate often with marked permanent disfigurement. Furthermore it occasions great mental distress to the patient and weakens and stunts the personality. Considering its obstinacy, chronicity, tendency to permanently disfigure, and its effect upon the psychic nature, it should be regarded as a serious malady and receive the most careful consideration at the hands of the profession. The purpose of this brief discussion is to consider some of the more important theories now advanced as to its cause, and add some ideas that have occurred to me as a result of my observations in a limited number of cases.

Acne vulgaris may be defined as an inflammatory disease of the sebaceous glands occurring at adolescence and characterized by an excessive secretion of sebum, occlusion of the ducts and the development of comedones, papules, nodules or pustules, sites of predilection being the face, forehead and shoulders. Many and varied theories have been advanced from time to time as the direct or indirect casual factors of this disease, several of which we now believe to have at most only an indirect bearing upon the disease. Among such causes may be mentioned gastro-intestinal disturbances, anemia, masturbation, excessive venery, or the reverse, sexual continence, urethral irritation in the male, uterine disturbance in the female, the establishment of puberty and the latest and rather attractive, though not generally accepted theory that it is due to a specific organism.

The majority of these are purely theoretical, without any reasonable physiological or anatomical basis and to my mind, all except one are unsatisfactory and incapable of being the prime

causal factor of an eruption such as acne vulgaris, which is constant in respect to the parts involved, the sebaceous or pilo-sebaceous glands; constant in its distribution, the face, forehead, and shoulders; constant in its time of occurrence, at adolescence; and depending somewhat upon the severity, constant in its subsequent course, chronic and subsiding when full adult life is reached; occasional exceptions to these constant features only proving the rule. I am convinced that there is but one of the foregoing enumerated causes which will square satisfactorily with all the various characteristics of this disease, and which we are justified in regarding not merely a predisposing, but the underlying cause of the disease, namely, the establishment of puberty with certain physiological processes incident thereto and which I shall more fully describe. The various other associated conditions as dyspepsia, constipation, anemia, etc., are functional manifestations resulting in other parts of the organism from probably the same underlying cause as the acne itself, but acting reflexly may aggravate the eruption once begun.

In considering the pathology of the acneic process let us first examine the comedo from which the later multiform lesions are evolved. These we find distributed as black specks in variable numbers over the face, forehead, neck, chest and shoulders, which are also the areas of distribution of the lanugo hairs. Also areas in which the sebaceous glands are very thickly distributed, and in which they reach their highest development, many being of the racemose type. The comedo is seen to occupy the orifice of the sebaceous or pilo-sebaceous glands, in and around which there is more or less hyper-keratosis, which by narrowing the duct together with the excessive secretion of sebum, contributes to its occlusion. The comedo is composed of an outer covering of epidermoidal cells, concentrically arranged and enclosing a mass of inspissated sebum, one or two lanugo hairs, and cellular detritus that has undergone fatty change. The black deposit at the apex being not particles of dirt, but a product of keratinization analogous to the black particles sometimes observed in the epidermal scales of ichthyosis. With the continued activity and secretion within the already occluded glands mechanical irritation results in and around the follicles, the stagnant contents of which offer an ideal culture medium for whatever form of organism may happen to invade the process, as a result of which we have the secondary inflammatory changes seen in the papules and pustules of acne. However, as the comedo is the essential element in the further development of

the acneic process, its formation demands special consideration. The comedo is a product of an excessively active sebaceous gland, the function of which when acting normally is the secretion of sebum in just sufficient amount to properly lubricate the integument and hair. The sebaceous glands, while occasionally being independent, are for the most part appendages of the hair follicles. One of the well known physiological changes incident to the establishment of puberty, is the stimulation of the pilary system, and increased growth of the hairs of the body, the scutcheon and axillary growth develop; in the young man, the beard, and in the young woman the lanugo hair becomes more prominent, and I have frequently observed that in young women suffering with acne, the growth of lanugo hair is often particularly abundant. *Whatever is the agent, which during adolescence produces this marked activity of the pilary system of which the sebaceous glands forms a part, is likewise the cause of their stimulation, the increased secretion of sebum, and the subsequent formation of the comedo. What is this agent of stimulation? While difficult of proof with our present indefinite knowledge of this subject, I nevertheless believe it is an internal secretion of the testicle in the male and ovary in the female.* The remarkable physical and even psychic transformations wrought in the organism with the establishment of puberty are familiar to us all, and quite analogous to the transformations observed in subjects of cretinism and myxoedema when thyroid is administered; reasoning from analogy there is some grounds for attributing to these organs an internal secretion which is responsible for the occurrence of adolescence and for all the physiological and anatomical changes incident thereto. The characteristics of the eunuch add further evidence, the usual transformations do not occur, the accustomed development of hair does not take place and the skin is as fine textured as that of a child. The aggravation occurring with the establishment of puberty in that other somewhat related disease, adenoma sebaceum, lends further weight to this theory, as does also the almost invariable aggravation of acne in young women during the menstrual period when the ovary is especially active.

The question may now arise as to why every one is not afflicted with acne, if it is due to processes incident to adolescence. The truth is, there are very few persons attain and pass through this period without having at least an occasional comedo or pimple development. The lesions may be very few, scarcely noticed and quickly disappear, in others the process is severe

and chronic. This we may explain by the variable thickness of the epidermis in different individuals. The thickness of the skin varies considerably in different persons, as does also the rapidity of the normal process of epidermic exfoliation, and these two factors, a thick skin, and sluggish exfoliation interfere with the free exit of sebum, and contribute materially to the occlusion of the ducts, and formation of the comedo, and explain the predisposition of certain individuals to the acneic process. The frequent occurrence of dyspepsia, constipation and anemia in connection with acne, has naturally given rise to their consideration as causal factors. Admitting the possibility of their having an indirect bearing, and capable of aggravating the eruption once begun, it is quite impossible to understand how they could have any bearing upon the development of the comedo. Why these conditions so frequently exist in adolescents is not difficult to understand; the rapid growth and marked metabolic changes incident to puberty require rather more than the ordinary amount of nutriment, accordingly in the adolescent the appetite varies all the way from normally good to voracious, giving rise to frequent over-indulgences and indiscretions in diet, which result in the various gastro-intestinal disturbances. There is usually a marked craving for sweets of all descriptions, this is probably due to sugars or carbo-hydrates being fat-sparing and proteid-sparing foods, and the craving is doubtless physiological at this period. The fermentative changes, however, which they readily undergo, renders them an undesirable article of food. In my examination of the urine of acne patients, I have found in nearly every instance an excess of indican, showing excessive intestinal putrefaction and formation of toxic products. The development and absorption of these toxic products from the intestinal tract is an active factor in producing the anemia, though the greater demands upon the blood and blood-making organs at this period may also have a causal relation in the production of the blood dyscrasia.

Certain observers, notably Gilchrist, Sabouraud and Unna, have studied acne from a bacteriologic standpoint, and claim to have isolated a specific organism as the true etiologic factor of the disease. That a microbic element is invariably present and plays an important role in aggravating or modifying the subsequent course of the disease, is granted by all; but the majority of observers seem unwilling to accept any specific organism as the prime cause of the comedo, and in this opinion I am led to concur.

Gilchrist has described a short thick bacillus, with branching forms in old cultures, which he has termed "bacillus acnes," and believes it to be the specific cause of the disease. He has also found the blood of the patient to agglutinate this organism in dilutions up to 1 to 100. Reasoning from analogy he suggests that the constipation, anemia and coated tongue so common in acne patients may be results of toxemia from infection with the bacillus acnes. Sabouraud ascribes to his micro-bacillus of seborrhoea the prime cause of the comedo, or rather that the comedo is a cocoon of the seborrhoeic bacillus, but he concurs in the opinion of most dermatologists that the pustule of acne is due to the secondary invasion of ordinary pus producers. Unna describes a mucin and pus-producing organism one-third to one-half micron broad by one and one-fourth to one and one-half microns long, as the specific cause of the disease, and considers the presence of staphylococci unnecessary in the production of the acne pustule.

I have made numerous cultures from acne lesions in all stages, using glycerine agar as a medium. The simple non-inflammatory comedo usually failed to give any growth, but occasionally the staphylococcus was grown. After inflammation set in this organism was frequently grown. The organisms found with greatest frequency in all lesions were the staphylococcus albus and aureus, and these of course are to be regarded as secondary invaders. From the descriptions of their organisms one can hardly believe the foregoing observers are describing the same organism; if their observations and descriptions tallied more closely, the germ theory of acne would be easier of acceptance. Gilchrist's work has been largely with secondary lesions of acne and his "bacillus acnes" might be a secondary invader and still be agglutinated by the blood of the patient. This merely proves there is an infection with this organism; it does not necessarily prove it to be the primary cause of the comedo, besides there seems to be no immunity to the patient against relapses, as would not be unreasonable to expect if acne were due to a specific organism which produced an agglutinin in the blood. When there are other plausible physiological explanations for the constipation, dyspepsia and anemia so frequent in acne, one can hardly believe them results of toxemia from infection with a specific organism; other infections capable of producing such constitutional disturbances also produce fever and headache, while acne is always afebrile and headache rarely complained of.

The co-existence of seborrhoea capitis with acne seems at first thought to lend weight to Sabouraud's theory. It is true we nearly always find dandruff with acne, but it is also true that the great majority of persons have more or less seborrhoea of the scalp, in comparison with which number the percentage of acne cases is very small indeed; with seborrhoea so unusually common it is but natural we would frequently find the two maladies concomitant. It is more common to see dandruff without acne than to see dandruff with acne, and when the two co-exist the seborrhoea usually persists long after the acne has disappeared. These facts incline one to disregard the seborrhoea as having an etiologic relation to acne. Acne is frequently observed among workers in tar and chlorine, these agents causing the acne by their stimulation and irritation of the sebaceous gland, producing artificially what the establishment of puberty accomplishes physiologically in the manner already described, and as Crocker has well pointed out, the production of artificial acne by these agents is rather against the germ theory inasmuch as they themselves are bactericides.

In the treatment of acne vulgaris both local and systemic measures are indicated, the main reliance, however, should be placed upon careful and persistent local treatment. The following are the indications to be met and the line of treatment which has given me the best results, namely:

First: The inflammation is to be subdued. While the general process of acne is chronic and requires stimulative treatment, there is nevertheless an acute inflammatory element to be first taken into consideration; one of the commonest mistakes in beginning the treatment of acne is to employ stimulating remedies at once. Such procedure gives rise to fresh outbreaks by irritating the already over-stimulated sebaceous gland, whereas by using soothing and astringent treatment the over-active gland is quieted and tendency to new lesions is lessened. To meet this indication I generally employ a solution of aqua plumbi with zinc oxid dram 1, and glycerin minims 20 to the ounce. Burow's solution acts equally well.

Second: Papules and pustules are to be opened and contents removed, comedones are to be carefully expressed, producing as little irritation as possible. In opening the papules a mere superficial prick is insufficient, nothing but blood being expressed; by making incisions sufficiently deep one will never fail to find pustular

or sebaceous material which may be readily expressed. Antiseptic ointments or solutions are also indicated to lessen tendency to re-infection with organisms on the skin.

Third: The epidermis is to be thinned. As the thick skin is one of the most active predisposing factors in the development of the disease, so in its treatment the overcoming of this condition is of greatest importance. For this purpose I employ a salicylic acid—resorcin ointment, varying the strength according to the particular disease in hand. The judicious use of stimulating and antiseptic soaps are also of value in this particular.

Fourth: The sebaceous glands are to be shrunk and their activity lessened; for this purpose the X-ray is a most valuable agent. A medium tube should be used and exposures varying from three to eight minutes given, the wall of the tube being about five inches from the area treated.

Fifth: Constitutional Treatment. There is no internal specific against this disease. The use of vaccines occasionally seems to improve the condition, but as a routine measure is quite disappointing. Arsenic and calcium sulphid are sometimes beneficial, but often unavailing. Regulation of diet does as much good as internal medicine, so far as any specific effect is concerned. Sweets, pastries and stimulants are to be absolutely interdicted, especially alcoholic drinks. Of all alcoholics beer seems to be particularly irritating to acne. A glass of buttermilk with each meal has in my experience proven beneficial. I have observed improvement in the digestive function and a distinct decrease in the indican content of the urine after its use. Medication should be directed to the correction of any abnormal conditions present, as indigestion, neurasthenia, constipation, anemia, etc. Intestinal antiseptics does more to improve the anemia than ordinary astringent iron preparations which seem often to aggravate the trouble; the peptonate or albuminate of iron I much prefer to the ordinary forms of iron.

Every acne case is, however, a law to itself, and there is no cut and dried method of treatment. It is a stubborn malady with the best of treatment, nevertheless the application of the foregoing principles with care and persistence has given me splendid results in all the cases I have had to treat.

THE ETIOLOGY AND TREATMENT OF ACNE VULGARIS.

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[Read before the Ohio State Medical Association.]

In acne vulgaris we have a disease which, on account of its prevalence, its resistance to treatment and the resulting disfigurement that it produces, has given rise to a very considerable discussion among dermatologists.

Before we can intelligently approach the subject of treatment of this disease, it is necessary to discuss at some length its etiology. This is by no means settled as yet and has been the object of considerable research by many workers in this field.

In discussing the etiology of acne we may divide the causes into predisposing, both constitutional and local, and the exciting causes.

Predisposing Causes—Age must be considered an important factor since the disease usually occurs from the ages of fifteen to thirty years, or the period of puberty, adolescence and young adult life. This has generally been attributed to the excessive activity of the sebaceous glands, occurring at that period of life when the skin is highly active. Anemia, chlorosis and mental and physical exhaustion are often the underlying causes. More important than these are the gastrointestinal disturbances in the various forms of dyspepsia, together with constipation. This latter condition is an exceedingly common condition met with in acne and by giving rise to absorption and consequent auto-intoxication is an important factor in producing relapses.

Various disturbances of the sexual apparatus, such as masturbation, uterine and ovarian disorders are sometimes at fault. In some cases the disease is aggravated at the menstrual period.

Locally we have the mechanical plugging of the sebaceous glands with cosmetics, tar, paraffin, chlorine and that due to insufficient washing as important conditions in the production of the disease.

Exciting Causes—under this head perhaps the most intense discussion has arisen. The basis of the acne lesion is the comedo and principally two theories have been advanced as to their origin.

Unna, Gilchrist and others hold that the comedo is the result of hyperkeratosis, the black point being due to a degeneration of the compressed horny cells, the exciting factor being the acne bacillus.

On the other hand, Sabouraud maintains that the seborrhoic micro-bacillus is the cause and forms a plug or "caccoon" of bacilli, the inflammatory reaction being due to the staphylococcus.

The bacteriology of acne has been the subject of considerable research in the last fifteen years.

In 1893 Unna discovered the acne bacillus in all comedones, but not in all the postules which he examined.

Hodara, a pupil of Unna, in 1894 succeeded in growing the bacillus. In the same year Sabouraud described his seborrhoic micro-bacillus and always found the staphylococcus present as well. Gilchrist, in 1899, described the acne bacillus of Unna present in all spreads made from ninety-six postules in fifty-five patients. In cultures, thirty-one also had the staphylococcus epidermus albus (Welch) present as well.

Ladd reports results which tend to confirm those obtained by Gilchrist. In an examination of smear preparations made from comedones in nearly one hundred cases, he found the acne bacillus present in nearly pure culture, the staphylococcus being present only when postulation had developed and then not constant. He cites as further evidence the fact that the opsonic index to the staphylococcus in early acne cases is nearly normal, while in marked pustulation it is very low.

The acne bacillus of Unna and Gilchrist has not, however, obtained general credence. Finger does not accept this as proven. He cites the bromide and iodide acne as evidences of an acne produced by purely constitutional causes.

Pusey is inclined to give some credence to it chiefly because Gilchrist found that the bacilli are agglutinated by the patient's serum in dilutions up to 1-100. He believes there may be two forms of acne, one produced by the acne bacillus and the other by the staphylococcus.

Crocker, while giving some weight to the bacterial origin of the disease, cites tar as an instance where an antiseptic to the bacilli produces acne by mechanically plugging the ducts. This may also be the case with the comedo acting mechanically and the bacilli playing no more role than the demodex or acarus folliculorum to which considerable importance was at one time attached.

Joseph, in a private communication, scouts entirely the theory of the bacillary origin of the disease and believes that constitutional causes are most often at fault.

From a perusal of considerable literature we must still hold the question as undecided. From the experience of those working with Wright's method we must give some credence to the acne bacillus, while at the same time recognizing that the various constitutional and local conditions de-

termine what individuals shall be the harbingers of the various micro-organisms.

Treatment—This devolves itself into local and constitutional. While local treatment alone may overcome any eruption that is present, it is only by the aid of constitutional treatment that we can hope to prevent its recurrence. By constitutional treatment, we may invigorate the patient, prevent gastro-intestinal auto-intoxication, and by the use of various medicinal agents hasten the disappearance of the lesions.

The patients should be instructed to take regular systematic exercise, avoid being out in inclement weather and stimulate and cleanse the skin by a daily sponging. The bowels must be regulated, especially in girls, and the usual cathartic remedies employed when necessary to insure a daily evacuation. When there is a great tendency to constipation and consequent auto-intoxication as indicated by increasing output of indican in the urine, I have found that the internal administration of menthol is exceedingly beneficial.

The diet should be regulated. Fatty or indigestible meats, pastry, cheese, alcoholic beverages, coffee and highly seasoned foods must be absolutely interdicted.

When there is an associated diminution of haemoglobin, iron should of course be administered.

In the great majority of instances, I have found the systematic and prolonged use of arsenic of great benefit in preventing relapses. It must be given carefully beginning with very small doses, and gradually increasing to prevent gastric disturbances. Should there be any evidence of irritability on account of its use, it must be discontinued at once and the stomach allowed to return to normal, otherwise we may have a recurrence from the gastric trouble itself. I have not found it difficult to give arsenic, even for prolonged periods if due caution was properly exercised. In those cases with marked suppuration, calcium sulphide gr. one-fourth, given four or five times daily, has been of considerable service in lessening this condition.

Herxheimer found good results from the use of fresh beer yeast, but reports no benefit from the ready-made preparations. I have had no experience with this preparation.

Local Treatment—The number of remedies used and recommended for this condition are legion, but remedies to the skin should be applied according to the condition present and not by the adoption of a series of set formulae. Any local treatment to be effective should be preceded by the removal of the comedones. This

should be accomplished by gentle manipulation, as otherwise this procedure of itself may produce new acne postules. If the comedones are difficult to dislodge, the process may be facilitated by the use of hot towels applied to the face for ten or fifteen minutes.

When the lesions are acute and the skin shows inflammatory reaction, we should begin the treatment by the application of bland soothing lotions. The most useful of these are the zinc oxide-calamine lotion, the lotio Alba freshly prepared, saturated solution of boric acid and the liq. aluminum acetatis. I prefer the latter in most instances. When used in dilutions of 1.10 to 1.5 it has given me very good results.

Sulphur is perhaps the most useful of all the local applications. It may be used in the form of ointments, using Lassar's paste as a base, in strengths varying from 2 to 30 per cent. The precipitated sulphur is probably the best form to use on account of its fineness. The activity of the sulphur may be enhanced by the use of resorcin which is perhaps next in usefulness to the sulphur. At times it may be advantageously employed alone in strengths varying from 3 to 5 per cent with white vaseline. The ointment should be applied at night and thoroughly washed off in the morning to remove all trace of fat.

In women I have often employed greaseless cold cream as a basis for ointments. This does not increase the natural greasiness of the skin often present in these cases and permits the use of remedies during the day, as it is practically invisible when thoroughly rubbed into the skin. This has been of very great advantage to me in the treatment of this disease. The use of this substance as a basis for the application of face powder is a great benefit in preventing the clogging of the sebaceous glands and the recurrence of the lesions.

Sulphur may also be used in the form of a lotion dabbed onto the skin and allowed to dry. It is best to add some alcohol to hasten evaporation.

When there is a considerable suppuration I have found the addition of white precipitated mercury to the sulphur ointment, of great service in controlling this feature of the disease. It is my custom to start with a low percentage and then increase gradually to the point of tolerance. In those cases which are of long standing the use of salicylic acid is of marked assistance in removing the upper layers of the skin and permitting a deeper penetration of the ointment. B. Naphthol is also useful for this purpose.

Ichthiol has been used with good results, but I have never tried it on account of its physical

properties which make it exceedingly objectionable.

After the application of some of the stronger agents the skin sometimes shows inflammatory reaction, in which case we must substitute one of lotions to bring the condition back to normal. For acne of the back, sol. Vlemnick is exceedingly beneficial and has given me very good results in most cases.

It is not the number of remedies that are used which give the best results, but the thorough understanding of the method of application of those we do make use of, which counts the most in the successful treatment of this disease. The reaction of the skin must be carefully watched and the treatment varied to suit the conditions.

When the lesions are somewhat indurated, the use of the actinic lamp twice weekly for periods of 15 to 30 minutes has given me excellent results as a supporting measure. For the deeper indurations the X-ray has given good results. By many dermatologists this is the method of choice. It is, however, in the long run, no more successful than some of the older methods, and I believe should be reserved for those cases which are obstinate to other forms of treatment.

Recently a method of treatment has been introduced, based on Wright's theory of vaccine thereby. This is by means of the injection of vaccine made from dead cultures of the acne bacillus and the staphylococcus, suspended in salt solution. This has given very good results and in my opinion should be given the preference over the X-ray.

Scherber, from Finger's Clinic, reports two cases treated with this method by the use of staphylococcic vaccine. These were practically cured after six injections given during a period of six weeks. He does not consider this method superior to the older methods in use.

King reports benefit from the use of vaccines.

Ladd reports twenty-eight cases treated with this method. He used a combined vaccine, the acne bacillus from stock cultures and usually an autogenous staphylococcic vaccine combined with it. Six cases were apparently cured, in nine cases there was marked improvement, while two showed no improvement. Five cases show improvement but are still under treatment, six cases received treatment irregularly and the results are now known.

Whitefield reports five cases cured after other methods had failed, two cases had relapses and three cases showed no improvement. He does not state what vaccine was used, but I learn privately that it was the staphylococcic vaccine.

Schamberg reports one case slightly improved,

two cases without any effect and two cases with marked improvement.

Through the courtesy of Dr. P. A. Jacobs, I have been enabled to see three cases treated with acne bacillus vaccine. In one case the number of pustules was greatly reduced and the induration entirely removed, while in the other two cases the pustules had all disappeared after four inoculations. These cases are all recent and of course the question of relapses cannot be answered.

On the whole, the reports of cases treated by vaccine therapy show it to be a method that is well worthy of a careful trial in rebellious cases.

From these results it is evident that we must recognize the limitations of each method of treatment and be ready to substitute another method for one that has failed to give results.

In conclusion let me state that this paper has been presented for your consideration merely to outline our present knowledge of this disease and its treatment, in the hope that the discussion may bring forth the methods which the workers in this field have found to be of most benefit.

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DISCUSSION.

Eason Holbrook, Lebanon: Acne vulgaris is to me the most interesting disease in the whole field of dermatology, and I believe that any physician who could find a treatment for it would certainly be worth several millions. I have tried everything mentioned by the two physicians, except the vaccine treatment and radium, and I failed with every one of them, and I do not believe there is a dermatologist in the world who can honestly say that he cures five per cent of his cases of acne vulgaris. I have haunted the clinics of every great skin doctor of America nearly, and they will get up and very emphatically say that they can cure it—some say twenty-five or fifty per cent—and I do exactly the same thing they do, and I know I am not stupid; I know I try to do exactly as they say, and I have

failed. However, whether they tell exactly how they treat it, or whether they treat it individually, as the first gentleman who spoke—the last one is a bit more definite—general treatment will never cure acne. I think Dr. Roop told the truth when he said that most cases of acne had to be treated separately, but of course he did not tell us how he treated every case separately; he cannot do that—it would take forever to do it. Individual treatment is the only treatment for acne, and what physician will tell us how he treats every individual case? I am frankly in despair; I have treated it for years and I have miserably failed. I always feel dishonest when a patient comes into my office with acne vulgaris, because I know I will probably take his money, and as I say, in ninety-five per cent of my cases I will fail, and it seems to me that we need some great Moses who will lead us out of this wilderness of acne vulgaris.

I am ashamed of my ignorance of acne vulgaris; I have bought every book by German, English and American authors, have never hesitated a moment to invest in the book, and it is the same with all of them. I have come especially to hear these two papers, and I think that as to practical information they are splendid papers, because they do not pretend anything; they frankly acknowledge it was a general treatment they gave us. They were honest. I have faced the great skin doctors of America, and I have known that they were lying to me in regard to their treatment of acne vulgaris, and I want to thank the two gentlemen. It was the most honest discussion of the subject I have ever heard, either in a convention or in a college.

M. L. Heidingsfeld, Cincinnati: I think it is our duty to take decided exception to the remarks of the first speaker, and not allow a statement of that character to pass without challenge. I, personally, feel sure that I can cure every case of acne without exception, under certain limitations, and those limitations are not on the part of the physician, but of the patient.

The two papers were excellent, and there is no exception to be taken to either of them, except as regards etiology. I do not think that the cause of acne is puberty, pure and simply. If that were the sole etiological factor, nobody would escape acne, and we know that the vast majority of individuals are not troubled with this disease.

To my mind, acne is caused by auto-intoxication to a very large extent, it plays the important role, and that is the essential principle in its successful treatment. Conditions at puberty, and during the period of adolescence are strong predisposing factors, the secretion is excessive, and elimination is sometimes impaired, but the exciting cause is some form of intoxication. You have heard from the essayists that certain local applications will cause acne in not only one, but every case, when it is carried to the degree of inducing intoxication. I take the view of Finger and others, that there is no local infection; acne is non-contagious, and it is not infectious. Since germs are present over the entire surface of the body all conditions, it is only natural that special types can be isolated, but we are stretching a point when we assume that such a special germ located superficially on the surface of the body

can cause constipation, etc. I believe that the real cause of acne is an infection from within, an auto-intoxication, which impairs the activity of the predisposed skin, to the degree that its general vitality is impaired; the skin in that manner becomes predisposed to secondary staphylococcal infection. I think routine treatment will clear up every case of acne. The general condition of the patient should be improved, and the sebaceous ducts freely opened and stimulated so that the contents can be readily excreted. Over-stimulation may produce a dermatitis, and that should be borne distinctly in mind. I think that the salicylated sulphur paste, if it is conscientiously and properly used, will cure any case of acne as far as the local treatment is concerned. Your patient must be put on a careful diet; every time he indulges in candy or sweets, or things of that sort he will have a recurrence.

Another point was brought up by one of the speakers which I think is a very unfortunate one, and one on which we ought to pass our judgment, and that is the sexual continence is one of the etiological factors. I think it would be a great mistake for medical men to allow this impression to gain credence. Continence is not the cause of acne, and if it were, it would be very poor counsel on our part to advise our patients to become sexually indiscreet. I think nothing is more erroneous, and more dangerous, and it would be a very dangerous precedent for societies of this character.

Adenoma sebaceum was mentioned as an etiological factor in acne. A great many of the so-called congenital anomalies of the skin, birthmarks, etc., begin to grow at the age of puberty, and often do not make their presence manifest until puberty. These tumors have nothing to do with acne at all.

The X-ray has great power, but is a dangerous agent to use. At times it produces results that are very unfortunate for the patient and when persistently used you cannot always forestall them. In a skin whose vitality is impaired by the X-ray you have a condition which is ten times worse than any case of acne. As long as the X-ray is not a "sine qua non," I do not care to use it in acne.

I have seen a great many cases of acne, and I have yet to see the first case that I have not been able to cure, provided the patient carries out instructions and routine treatment properly. We ought to bear in mind that routine treatment will cure every case of acne. In acne we only treat by local treatment an effect which is the same in all cases, but the predisposing causes vary and require their special consideration. The treatment ought to be successful in every case, provided our attention to details is all it should be. As to arsenic, I have never felt obliged to use it, it would probably be of some avail in a great many cases, in as much as it improves the patient's general condition.

J. E. Tuckerman, Cleveland: I believe that in the treatment for any disease the following of routine is of great value, yet it must be remembered that the treatment is not of the disease, but of the patient. I mention this particularly because of an instance which occurred with a patient who had a recurrent phlyctenular keratitis, some-

times in one eye and sometimes in the other, that would not get well under the usual treatment. I was led to use small doses of the tuberculin in this case, believing, on account of the glandular enlargement the girl had, and also on account of the family history, that the keratitis was due to the so-called tubercular diathesis. This girl was also subject to severe acne which was sometimes better and sometimes worse. She was very hard to regulate in the matter of diet, which is of great importance, and while intestinal antiseptics seemed to do some good at times, there was constant relapsing. Incident to the giving of tuberculin and the cessation of all other medication, the acne has cleared up, and stayed cleared up for three years.

I mention this case because here the general physical condition of the patient seemed to be the one factor which was preventing the cure for her acne.

The last speaker is to be complimented for his stand on the question of continence. It is definitely known that freedom from acne is not dependent upon continence or incontinence. This is an old and exploded theory, but is still doing a great deal of damage.

C. J. Shepard, Columbus: The papers of Drs. Roop and Sampliner were both practical and to the point.

The general treatment of acne is rather a complicated affair, from its varied pathology.

A very thorough examination should be made in order to correct the condition at fault. Unfortunately, there are no specifics, and we often find our cases very troublesome. I haven't any faith in arsenic. Hygiene of the face is important. Proper washing with Heber's soap spirit and evacuating the contents of the lesion, not by means of a watch key, but with a sterile needle and stretching the skin rather than squeezing it are important.

Sulphur is the remedy par excellence for local use. It may be used in ointment form or as a lotion. I often use Vlemnick's solution. Next come resorcin, mercury, betanaphthol, etc. Care must be exercised in the use of the X-ray machine. The dry, wrinkled and old appearance is more disfiguring than the acne.

Vaccines in my hands have been of use in some of the superficial cases.

If we are persistent in our treatment these cases will get well.

A Ravogli, Cincinnati: I must congratulate both the essayists. They have gone over the subject carefully. I must say that I think acne is related to seborrhea. Seborrhea is that which causes the comedos, and from the comedos comes acne. The secretion of the sebum in acne is abnormal. The sebum is hard because it contains less oleic acid and more stearic acid, and for this reason we have a large secretion of sebum which is hard, and retained in the excretory duct of sebum which is hard, and retained in the excretory duct of the gland, so this formation of the sebum forms the comedo. These conditions, in a great many instances, are produced by the conditions of general health. In my experience 90 or 95 per cent of the cases of acne are associated with constipation, and we know what constipation is. The sulphuretted hydrogen is retained, and when absorbed and carried into the circulation is capable of di-

minishing the quantity of iron and hemoglobin, and so causes the anemic condition which we find very often associated with acne. For this reason I always insist in asking the condition of the bowels of these patients, and I believe that the intoxication in the intestinal tract is the cause of the seborrheic condition and hence the acne. The formation of the pustules is no doubt secondary, from the pus-producing organisms.

I want to say that I think that practically most of the cases of acne that have come under my treatment have been cured, or at least greatly improved. It may take a long time or less, that we cannot say. The internal treatment given must be according to the condition of the patient. Regulation of the bowels is important. The resorcin and sulphur, locally applied, have always given good results, in places where there is a great deal of suppuration I find ichthyol liniment preferable.

I am afraid of the X-ray; I have seen one case where a law suit was brought against the doctor who had used the ray, and I have been somewhat afraid of the X-ray in this affection.

C. S. McDougall, Athens: I came in on purpose to hear these two papers on acne. I am only a general practitioner, but we have our troubles with acne vulgaris. I have seen cases, of course, under my treatment get well; I do not say I cured them, but they got well while I was treating them, and I have seen cases I failed on and my competitors failed on, and the most distinguished dermatologists in this city failed to cure them. It did not happen in only one case, but a number of cases. I remember one case that came to Cincinnati every few weeks for more than a year, and the treatment failed to cure him. Then he went to a man who was capable of giving the opsonic treatment, and it was surprising to me how quickly that case yielded to the opsonic treatment, consequently I was very much surprised not to hear anything said about the opsonic treatment of acne vulgaris. A few of these cases have been reported in the journals, and a man in my town has been doing that work and I have seen a few cases that were cured by this method, in which other measures have ignominiously failed, and I would like to know from the essayists what their experience in that line has been, whether we have anything promising in the opsonic treatment or not. I do not refer to the stack serum.

J. Metzger, Toledo: In regard to the etiology of acne, I agree with Dr. Heidingsfeld, Dr. Roop and others, but I believe it is due primarily, in a majority of cases, to a disturbance of metabolism. I think this is well shown by the fact that so many cases under local treatment alone do not get well, while if the constitutional treatment is added they go on to recovery. I agree with others who have preceded me in the discussion of these papers, that 95 per cent of the cases are curable, but as suggested by Dr. Heidingsfeld, the patients must do their part or they will certainly not be cured.

There are two methods of treatment that have not been mentioned; one is curettage of the face as recommended and practiced by Geo. H. Fox, of the New York Skin and Cancer Hospital. It is simply the removal of scales and apices of lesions, with the ordinary bone curette; I have had some very good results from the curette, after other methods have failed.

The other method to which I would direct your attention is the use of the Bier vacuum cup. I have found this efficacious, especially in cases that tend toward furunculosis; after opening the furuncle, and the application of the cup, the inflammatory process subsides in a very short time.

A. W. Nelson, Cincinnati: Practically everything has been covered. I think the most important thing, besides the therapeutic treatment, is to impress the patient with the fact that it will take considerable time to cure the condition. If the patient expects to get well too quickly I think that the result will be a failure. A good many patients are apt to grow impatient and stop the treatment too soon.

W. I. LeFever, Cleveland: In treating these cases, in the internal treatment I always try to give what is indicated, but there are three things I insist upon the patient taking internally in every case, and they are water, aqua Lake Erie, and H₂O. As to the local treatment, I use the X-ray in every case of acne. I consider it very safe if you use the proper technique. Personally, I have had no trouble with this class of cases, and it is certainly indicated when we consider that the sebaceous gland is the seat of the trouble, and the X-ray will produce an atrophy of this gland, but we must remember that it will also shrink the gland before it will injure the skin in any way. Of course, we must be on the safe side, and go slow and watch the reaction on the skin, but if this method is followed there is not a particle of danger. I do not think the X-ray is more dangerous than sitting under these electric lights, when it is properly handled. I have been using it for seven years, have never had a burn, and have been getting some excellent results in this particular disease.

Wm. O. Roop, Dayton (closing): In the first place I want to answer the first speaker. I dare not take so gloomy a view as to the prognosis of this disease. I can say frankly I have been curing my patients of acne and no one knows it better or appreciates it more than the patients themselves. The fact that their faces were badly broken out and are now well is very sufficient evidence to refute the doctor's statements. I have had no case to treat that has not improved, several have been entirely cured, others improved, and I believe with continued treatment will get entirely well.

Dr. Heidingsfeld, in speaking of the etiology, says that acne is due to auto-intoxication. Now if that be true, why do we have this particular form of intoxication at this particular period of life and in the particular distribution of this disease? Why do we not have that manifestation of intoxication before puberty or after adult life has been established? Its occurrence outside of this period is very exceptional, consequently you must admit that puberty has a marked bearing on this disease.

He also asks the question, Why, if it be due to puberty, does not every one have acne? I feel that he has not followed my paper very closely, or he would have noted that in presenting my paper I asked and answered this question. We all know the thickness of the skin varies in different persons as does also the rapidity of normal epidermic exfoliation, and these two factors, a thick skin

and sluggish exfoliation, one or both being invariably present, interfere with the free exit of sebum and predispose to the acneic process and explain why certain persons have acne while others are free from it.

I said nothing to even suggest incontinence as a cure for this disease; I have only stated that I believe the principal cause of this disease is an internal secretion of the testicle in the male and ovary in the female, this secretion causing the stimulation at puberty of the pilary system of which the sebaceous glands form a part and which are the parts involved in this disease.

This does not warrant any person to be sexually incontinent and I do not see how such a conclusion was drawn.

As to adenoma sebaceum, it is not, of course, anything like acne; we know that this condition is a congenital disease, but there is almost always an aggravation at puberty of this malady and it only shows that the glands are stimulated by something at this period and that something I believe to be an internal secretion of the testicle in the male and ovary in the female.

Wm. E. Sampliner, Cleveland (closing): I wish to thank all the members of this section for their hearty discussion of this paper. As to the first doctor who spoke, I believe her results are rather the exception, because the percentage of cures in this disease in my own experience, are considerably more than 5 per cent in fact, as Dr. Heidingsfeld and the others remarked, the condition is curable in all instances where treatment is persisted in, and where the patient is willing to, and does, carry out the directions given.

In regard to puberty, the percentage of people who get acne is so small according to Crocker—in 15,000 cases only 3 per cent in hospital practice, and 6 per cent in private practice—that I believe that the internal secretion, so-called, must have something else to aid it in producing this disease, if it does in any case. I heartily agree with the speaker who declares that continence is entirely compatible with the curative treatment of acne.

In regard to the X-ray as a method of treatment a man who has done more work with electricity in dermatology than any man in the world—Professor Ehrmann, of Vienna—in a book I recently received from him, mentions specifically that where there is no possibility of accurately measuring the passage of the X-ray, it should be left entirely alone, and even when used, it cannot be depended upon as a the sole means of treatment in this disease.

In regard to Dr. Tuckerman's experience with vaccines, Dr. McDougall, if he had been here, would have heard me go into this matter very thoroughly. Treatment applied accordingly to the opsonic theory is called vaccine therapy. I have seen results from vaccine therapy, whether we believe in it or not. I have had the chance to see cases that have been absolutely cured by the administration of vaccines made from the acne bacillus in two instances, and in another case the combined vaccine made from the acne bacillus and the staphylococcus. Now, I have given the gentlemen with whom I am working on this proposition, an experiment to perform similar to the one related, that is, I told this man that the results from the vaccine therapy may be due, not to the

fact that the acne bacillus is the specific cause of acne, but that its administration increases the number of leucocytes, and the leucocytes bring about a cure in the disease, and we will perform this experiment as soon as we can get the proper cases.

Dr. Shepard has agreed with me in most of the points I mentioned. Under the microscopic examination of acne, we find there are two forms; we find the acne that comes from a comedo, and superficial lesions of the skin that do not always come from a comedo, and the results in vaccine therapy depend upon the form of vaccine that is used.

Dr. Ravogli mentions the connection between acne and seborrhea. I would use the same argument here and say in regard to this, that seborrhea is so prevalent in proportion to the number of acne cases that it is hardly possible to put one before the other, and the appearance of seborrhea is not always the precursor of acne.

I have mentioned in my paper the use of menthol. I would like to emphasize this, as it is probably the best so-called intestinal antiseptic we have. Thiol that Dr. Ravogli mentioned is very good, but I do not believe you will find very many patients who will consent to its use.

In regard to Dr. Metzger's statement, I mentioned in my paper that it is only by means of constitutional treatment that we may hope to prevent relapses, and that the local treatment alone will not cure the condition. Curettage is good in indurated cases, but I believe that it should be very carefully performed, in order that we may not stir up and excite an inflammation of the skin and a consequent increase of the acne.

Dr. Roop mentions thickness of the skin as one of the causes or factors in the production of acne. I do not think this holds true in a considerable number of cases; I believe the thickness of the skin is a result of the acne, and not its cause.

PSYCHASTHENIC STATES.

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[Read before the Ohio State Medical Association.]

It is my purpose to consider the strictly mental manifestations of the psychasthenic state and not include the motor phenomena originating in the compelling impulse which are designated motor tics, or tic convulsif.

Psychasthenic states are variously expressed in compulsive ideas, phobias or morbid fears, doubting manias, and morbid impulses or irresistible propensities and are sometimes classified under the terms of obsessions, ideo-obsessions, psycho-neuroses, neurasthenia, phrenasthenia, mental tics and degenerate delirium.

Janet, who first suggested the name psychas-

thenia, at one time used the term "doubters," for these cases, as doubt constitutes an essential characteristic of their thought.

In a paper read at a recent meeting of the American Neurological Association, criticism was made of the term psychasthenia for the group of symptoms representing the class of cases under consideration. The writer thinks "Asthenia a misleading word to apply to one who is ready and willing to walk miles to satisfy a doubt, or to ascend a dozen flights of stairs to avoid an elevator." While considered from the standpoint from which he evidently reasons, that the patient possesses such mental strength that enables him to will and execute an act which his better reason and judgment oppose, his conclusions would be correct. It seems to me, however, that his views are not well taken, since the true weakness of the psyche is evidenced in the more or less constant presence of the besetting idea and the inability to control the contributing influence of the obsession against the normal volition. The power of volition is enfeebled, hence a response to the dictates of the imperative conception.

Doubt, indecision and a consciousness of incapacity is described by Janet as constituting the typical psychasthenic.

Obsession, a term used to express this array of diverse symptoms, is derived from the Greek, meaning "besetment by evil spirits," or is defined as "a morbid mental state due to the action of an imperative idea or feeling which persistently assails and vexes the mind."

The cases described under the head of psychasthenia should I believe be recognized as representing a distinct disease, and apart from hysteria and neurasthenia, to which latter especially, the symptoms are too frequently referred. The absence of the motor, sensory and special sense symptoms or phenomena peculiar to hysteria at once justify us in a distinction between the two conditions.

Many cases of psychasthenia are incorrectly diagnosed neurasthenia, which latter disease though regarded as of very common occurrence is not so frequently observed.

The motor symptoms expressed in the general muscular weakness, the headache, and the insomnia in the neurasthenic do not obtain in the psychasthenic state. Even in the exceptional cases where the somatic symptoms of psychasthenia are of sufficient prominence to be recognized, the mental involvement is of such intensity as to render the bodily factor of comparative insignificance.

Psychasthenia may be considered a minor psy-

chosis or "borderland-insanity," as it is not an insanity in the common acceptance of the term.

It is highly probable that most so-called normal individuals have experienced at times a morbid impulse which the better judgment opposed, or constantly recurring ideas have assumed possession in spite of their efforts to eliminate them, and undoubtedly there are many cases in which obsessions are present in some form and probably to a marked degree that never come under the observation of the physician. Recognizing the unreasonable character of the trouble they are not inclined to reveal the condition experienced. Mental power is sufficient to keep secret so completely that which harasses them that their most intimate friends and relatives little suspect the torments to which they are more or less constantly subjected. It is in those cases in which the dominating influence of the fixed idea becomes intolerant, that eventually the true state of mentality is disclosed.

The compulsive ideas which have no connection with the existing train of thought, force themselves into consciousness and persist in spite of efforts to dispel them, the patient recognizing at the same time the absurdity of such morbid ideation and fears. The continued repetition of these intrusions creates an impress on the mental faculties, and eventually tends to become the dominating influence of their lives. Otherwise, there is generally little or no disturbance in mentality. Indeed many possess an extraordinary intellectual capacity.

The clear insight into their condition is in marked contrast to the paranoiac and other insane whose perverted conceptions to them have a true basis as the result of illogical reasoning, thus becoming delusions. And unlike the hypochondriac the psychasthenic is not troubled with the constant and varied imaginary ailments which he is ever ready to carefully narrate to both willing and unwilling ears.

While this condition may co-exist with hysteria and neurasthenia, it is far more frequently independent of these and other nervous disorders. Mental depression naturally obtains in many cases to a greater or less extent, though further progress to a true psychosis is rarely observed.

Males and females are said to be affected in about the same proportion, though my experience has shown a preponderance in the female.

The disorder usually develops under the age of thirty years, the period from fifteen to twenty-five years presenting the majority of cases. Instances are recorded as early as the tenth year.

The psychasthenic possesses a neuropathic constitution. Insanity, organic and functional neu-

roses or alcoholism may have existed in the ancestry. The mental equipoise in individuals so endowed is frequently disturbed by causes wholly inadequate to affect those more fortunate in their inheritance.

The provocative or exciting causes are numerous. Any illness which impairs the general nutrition may be a factor in producing the trouble. Thus, infectious diseases, anemia and digestive disorders, alcohol, opium and other poisons are influential in the causation of this as well as other forms of nervous and mental diseases, by causing a vitiated blood supply to the nervous elements. Again the symptoms may develop without apparent exciting cause.

The irrepressible thoughts assume a variety of forms.

Obsessions are frequently represented as phobias or morbid fears. Patients suffering from these obsessions experience a constant state of anxiety in reference to some impending danger, notwithstanding their reason and judgment indicate the utter absurdity and harmlessness of such impressions.

Among the morbid fears which are probably of most common occurrence is mysophobia or fear of dirt, contagion, or infection.

A good illustration of this obsession came to my notice several years ago. The patient, a married woman about thirty-five years old, of neurotic type, developed the fear of contamination. She would wash her hands every few minutes during the day. Every act of touching anything was accompanied with the idea of the presence of germs of disease. She would hesitate long before sitting, being fearful of coming in contact with dirt or sources of contagion. She wore a heavy veil on account of the germ-laden air. In the morning she stood in the bed to dress herself because of the possible infection of the floor. She declined to take medicine from the family physician because the bottle might not be clean. These are only a few of the fears she entertained. Although she had previously refused to perform any household duties, after she was admitted to a sanitarium she was made to take books from the shelves, dust and replace them, assist in washing dishes, sweep her room, dust the furniture and other work of like kind, which for a time occasioned much anxiety and concern, though eventually some relief of symptoms resulted.

I know several persons in whom the fear of contagion exercises such a powerful influence that money is handled with the utmost care, owing to this being a possible means of conveying disease.

The morbid idea is uppermost in the minds of these persons in the execution of every act. It

prevails in getting on and off the street cars, in shaking hands, in eating and drinking in public places where the dishes and glasses are most carefully inspected, and in every conceivable act in which such fear can possibly be associated.

One of my patients, a man thirty-two years of age, strong and robust physically, is overcome with a morbid dread of closed spaces; the condition known as claustrophobia. He is overwhelmed with an indescribable feeling of apprehension when in a confined space, especially when alone. Although he appreciates the unreasonable character of his anxiety, all efforts to control this feeling are to no avail.

Agoraphobia is the fear or anxiety arising when in open spaces. The patient fears to go on the street alone; hesitates in crossing streets, squares or open lots. In some cases after numerous attempts this feeling is controlled and he is able to proceed along his journey. In the more severe cases the fear so dominates the mind that he is unable to walk further until relief is afforded by the presence of some other person who will accompany him. Fully comprehending the groundlessness of such fears and not withstanding resolutions to be no longer controlled in this manner the same indescribable dread assails him again when alone in open spaces.

Other morbid fears or anxious states are zoophobia, or the morbid dread of animals; anthropophobia, the fear of contact with fellow-man; erythrophobia, or fear of blushing; nyctophobia, the fear of darkness; amaxophobia, fear of vehicles; astrophobia, the fear of lightning, and cremnophobia, fear of precipices.

The fear of high places is frequently observed in persons when in tall buildings or in high places, they feel compelled to jump out.

A traveling man who consulted me was possessed by this morbid fear to such an extent that when he was unable to get an inside room in the hotel where he was in the habit of stopping, would secure quarters elsewhere on the ground floor.

A case of much interest because of its character and long period of intermission between attacks, is that of a married woman, twenty-nine years old, possessing a neuropathic constitution. Her father was melancholic and suicided by shooting himself. During her last year in high school, she was a subject of imperative conceptions, the symptoms continuing a year or more in varying degrees before recovery. When I saw her the first time, she feared she would put her hand on her sexual organs or that she would masturbate when alone or even in the presence of others. Although she had no inclination to execute these ideas, the imperative conception was almost con-

stantly present. In conversation with friends and members of the family, she feared she would say something that was wrong or use unbecoming language. She realized the absurdity of such ideas but they were paramount in her mind, and impossible to control.

I saw the patient again six months later, at which time she experienced some relief from the symptoms described, but was now obsessed with the idea that she might be ravished by dogs. So intense was this mental impression that she would look about to see if they were in the room. In relating her trouble she said she was convinced of the impossibility of the accomplishment of such a thing, but as being absolutely powerless to control such thoughts.

A farmer's wife in a neighboring county possessed the idea that her children would be poisoned by aconite. The origin of this obsession was based on the fact that her husband had at one time long since kept tincture of aconite in the house, which he administered occasionally to sick horses. All precautions were taken against the possibility of an accident. This with other medicines was kept locked in a chest which was inaccessible to the children. In spite of such care, the idea still persisted. The chest with contents was removed to the loft in the barn, still she was obsessed with the fear. This woman realized the impossibility of such an accident, but was unable to relieve herself of the morbid impression.

A young lady, aged twenty-one years, youngest of a family of seven children, and possessing a neurotic inheritance, her father having died insane. For nearly a year she had been worried with the constantly recurring thought that she would poison the drinking water and thereby kill members of the household. There was no impulse or desire to carry into effect such an idea but the more or less constant feeling that she might do so. She was also annoyed with the thought that she would say something regarding her friends which was untrue, and experienced great concern at times because of the feeling of having spoken unjustly of them, although recognizing there was absolutely no basis or cause for such thoughts. She was so governed by this distress that despondency and emotional disturbances were frequently manifest.

A woman forty years of age, married. Domestic relations are extremely pleasant. For nearly a year she has been suffering from an imperative conception. This assumed the form of a constantly recurring thought that she might kill her sixteen year old son to whom she is intensely devoted. Mark you she does not have the im-

pulse to kill him, but the thought that she might, which is attended with all the unspeakable horrors of such an act. The sight of a knife or any instrument with which such an act could be accomplished, fills her with feelings of fear and terror. Twelve years ago this same obsession obtained in reference to her child who was then four years of age and continued for more than a year, followed by relief until recurrence of the trouble eleven years later. At this time there was no impulse to kill the child, but the terrible recurring thought that she might.

A young married woman, twenty-six years of age, was obsessed with the idea that she might kill her child of two years. In passing the cistern the thought would occur, "suppose I would throw him in." The appearance of a hatchet or a butcher-knife would suggest the thought, "I might kill him; oh, suppose I would." She told me that when at work in the kitchen the torments she experienced were indescribable. Every time she would use a knife the horrible thought would intrude. In this case, too, there was no impulse to kill the child, but the dread that she might and the terrible mental impression of the act and its results.

I was recently consulted by an intelligent and active business man about forty-three years of age who said that for some time he had suffered from imperative ideas which were the source of great annoyance; the idea at this time which was more or less constantly present and created such a feeling of unrest and nervousness as to almost drive him to distraction was the fear that he would pass counterfeit money. He would give his check for purchases made whenever this was feasible. While on a trip to California he suffered constant mental pain and anxiety. The thought possessed him that he might unconsciously offer money which was counterfeit in some strange city where he was unknown, when he would be arrested and suffer consequent disgrace. He realizes the improbability of such a thing but it is impossible to relieve his mind of this intrusion.

A well educated business man of our city is beset with the idea that he cannot read. The thought occurs, "I cannot read; suppose I could not read." He appreciates the fact that he is able to read and that there is no basis for the absurd idea which from time to time exercises complete control of him. He will walk up and down the principal streets reading the different signs as he goes along in attempts to convince himself that he is able to read.

A young man about twenty-seven years of age suffers with the more or less constant mem-

ory of friends and acquaintances who have died and with the idea that he might have been instrumental in the cause of their death; this he understands is wholly without foundation and appreciates the faultiness of such ideation but in spite of his efforts to reject such impressions, the thought occurs with all the unpleasant accompaniments.

A female, aged forty-two years, unmarried. At the time I saw her she had been affected with morbid ideas for more than eight years. When in company with her sister, with whom the most pleasant and devoted relations had always existed, she was seized with an indescribable sense of oppression and notwithstanding all efforts to control such feeling, there was no cessation of this strange sensation under the circumstances named. She finally concluded to leave home and with the hope of relief, came to Columbus and was here but a short time before the same feeling was experienced when in the presence of her employer. The mere thought of being with her was attended with much anxiety and so intense was this feeling when in her presence, that great difficulty was experienced to resist the desire to leave the room. She also is apprehensive that she will express herself in an obscene manner, which adds further to mental disquietude.

Numerous are the instances of morbid indecision or doubting mania. They are almost unlimited in variety, and arise in respect to anything in which a question of doubt can possibly be associated.

Frequently a question of doubt presents itself in the minds of persons as to whether they have acted with propriety, and they are often troubled with the idea that they have made some mistake in matters of the most trivial character.

Morbid indecision is shown in the instances in which the subject questions which shoe or sock he should put on first, and considerable time is spent in the mental debate and effort toward overcoming the doubt which occupies the mind before this simple procedure is finally accomplished.

Doubt is expressed in the minds of some patients in reference to whether they did certain things correctly, and often concerning matters of little importance. "I know I did not do it, but suppose I did; I wonder if I did; wouldn't it be awful if I did," and thus the argument continues in the minds of the discomforted until in some instances pronounced mental agitation results.

Morbid indecision or doubt is commonly seen in the individual's inability to convince himself that he has locked the doors securely, or that he has turned out the gas, and being governed by

this question, will try the locks and gas keys repeatedly, although temporarily convinced each time that it has been done.

One of my patients could not resist the effects of the doubt that the fire in her room had been extinguished previous to leaving home for a visit to a neighboring city. She returned to Columbus to relieve her mind of such doubt, despite which she continued to be annoyed by the same cause; the doubt and attendant anxiety continued during her visit, and it was only after much discomfort and great resistance against the desire to reassure herself from time to time, that she was able to conclude her visit of several days.

The obsession propensities or morbid impulses vary in form and degree from impulses to harmless acts, to those of homicide, suicide, theft, arson and periodical inebriety.

The impulse to utter certain words repeatedly and the besetment to utter profane and improper language are sources of distress.

One of my patients, a descendent of neurotic stock, is impelled to repeat a series of French words over and over again.

Dana mentions the case of a clergyman who developed impulses to an automatic coprolalia and profanity when at work in his study, and even while preaching.

Maudsley had a patient who was so tormented for weeks by an impulse to overturn two stones which lay upon a wall, that he was finally forced out at night to perform the act.

Other morbid impulses of a harmless character are those in which the person is impelled to touch objects of different kinds, to walk in a certain manner, etc.

The true criminal is prompted by selfish motive to murder, steal and fire buildings, while the victim of obsession propensities is compelled to commit such acts by the dominating influence of the morbid impulse and against the will.

The prognosis of psychasthenia is in the main unfavorable. In instances of less pronounced degree and where treatment is instituted early, permanent recoveries are no doubt frequently observed. In others a decided improvement or apparent recovery may result, but after remissions and intermissions of varied periods, recurrences are apt to follow and the condition become more or less continuous. The outlook for a permanent cure where a pronounced neurotic heredity exists is bad, since the inherent, unstable, nervous organization is peculiarly susceptible to influences which may develop a recurrence of the trouble. Progress to a more serious or true psychosis is seldom seen.

Being a mental trouble, psychic treatment is de-

manded. Study your patient thoroughly and gain his confidence. Explain to him the true character of the malady and of the groundlessness of the fear so many entertain that they will become insane. Suggestion in its various methods of application is attended with good results; hypnotism, however, is not advisable. Encourage the patient to use every effort to control his feelings, and follow the dictates of his better reason and judgment to the fullest extent possible. Change of scene and occupation, with relief from cares of business routine and efforts tending toward the establishment of interest in new things is sometimes beneficial.

Regarding medicinal and other measures when indicated, restructives, cold spinal douches in the morning and hot baths at night are useful additions to our therapy. When sedatives are needed bromides act best.

112 East Broad Street.

OCULAR SYMPTOMS OF ARTERIO-SCLEROSIS.

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[Read before the Ohio State Medical Association.]

Arteriosclerosis in its fully developed form is a disease readily recognized. Its cardinal points are:

1. Thickening of the peripheral vessels.
2. Signs of hypertrophy of the left ventricle as shown by displacement outward of the apex beat, the thudding first sound, and the accentuated aortic second.
3. Increased blood pressure.
4. A slight and variable amount of albumin in the urine.

With this group of symptoms present, it is not difficult to make a diagnosis but unfortunately it is then too late to accomplish very much by treatment.

As stated by Osler¹ in the chapter upon diseases of the arteries in a recent volume of Modern Medicine, the vessels of the head, of the heart or of the kidneys may be in an advanced stage of sclerosis without any change in the palpable arteries. In its development the disease may progress more rapidly in the large or in the small vessels but the most serious form is that in which the smaller vessels are chiefly affected and which comes on in middle life or in young persons. It may be in part a senile change and in part a

definite result of a pathologic stimulus and these two components, as Coats says, are not always easily separable.

In the pathologic as distinguished from the normal or senile arteriosclerosis, says Stengel², the causes which have brought about the disease also tend to make its progress in one part more rapid than in another, and we find that when manifest clinical symptoms develop, the brain, heart, or the kidneys may suffer disproportionately, so that in the late stages one case may present itself in the aspect of a cerebral disease, another as a cardiac and another as chiefly a kidney disease.

As the most serious form is that which involves the smaller vessels, it is evident that from the point of diagnosis it is important not so much to detect the changes in the main trunks and large arteries as it is to recognize involvement of the smaller vessels.

While the disease in any of these typical forms is in its fully developed stage easily recognized, a positive determination of the existence of the earlier stages is, according to Stengel, extremely difficult but most essential, if we are to accomplish anything in the way of controlling the progress of the disease. The arteries of the retina are small arteries and terminal ones at that, which by means of the ophthalmoscope we can actually see and carefully study without interfering in the slightest with their functions and can there observe changes which would be too slight to detect by touch in small arteries elsewhere. Osler says the retinal arteries are the most important blood vessels in which to see early thickening and Stengel also calls attention to the possibility of early diagnosis by ophthalmoscopic examination, while Parsons³ states that "primary arteriosclerosis as a part of a general arteriosclerosis is not uncommon in the retina."

These angio-sclerotic changes are often very irregular in distribution. While different areas may be affected as the brain or the kidney, even within the same area, vessels of different size may be differently affected and we may even find notable differences within a short space in the same vessel. While changes in the retinal vessels may be manifest in any type of arteriosclerosis, they are particularly apt to be present in the so-called cerebral type of the disease and yet even in this type we must realize the limitations in the value of our findings and recognize the fact that certain reservations must be placed upon the interpretations of the ophthalmoscopic examination. As in suspected brain tumor the presence of choked disc is the strongest evidence in favor of such a tumor, while the absence of swelling of the nerves is not

positive proof of the absence of a tumor, so here the positive evidence is much more valuable than the negative. There may be indications of an extensive atheroma of the general arterial system and yet none in the retinal vessels. On the other hand the general evidences of arteriosclerosis may be slight while the evidence in the retinal arteries may be marked. In short "the degree of the variations in caliber (or sclerosis) of the retinal arteries does not bear," as Friedenwald⁴ says, "a definite relation to the signs of arteriosclerosis in other parts of the body." While the absence of change in the arteries or other structures of the retina is not proof that other vascular areas are normal, the presence of such changes is of most positive and valuable significance. As George Coats⁵ says, "Although this fact detracts somewhat from the value of the ophthalmoscopic evidence of general vascular disease, yet it remains the best indicator of the state of the vessels generally that we possess."

Gower⁶, one of the earlier writers upon this subject, in a most valuable paper brought forward this fact that the chief importance of these evidences of angio-sclerosis of the retinal arteries lies in their association with a more general arterial disease of similar nature, particularly in the kidneys and brain and in its prognostic value in regard to the results which may follow in the cerebral vessels. As the distribution of the arteriosclerosis may be localized, so the vessels of the eye and brain may be affected without those of the kidney being involved. Granular kidney associated with arteriosclerosis is often not accompanied by albuminuria.

In the presence of arteriosclerosis of the retinal vessels the prognosis becomes important in two aspects, as regards the vision and as it concerns the life of the patient. We are all familiar with the general prognostic significance of albuminuric retinitis. The majority of patients die within two years after its inception and a considerable percentage within the first year of its development.

In ocular arteriosclerosis Woodruff⁷ says: "Not until the gross lesions have shown themselves in the eye can we positively say that a fatal termination is apt to occur. The mere fact that such conditions exist in the retinal vessels does not warrant us in assuming that the disease is going to progress to such a stage as to affect the function of the kidneys or to degenerative changes in the brain." Gunn states that it is only in cases where retinal changes have far advanced as already to have caused hemorrhages in the retina that we could speak of the probability of an approaching cerebral hemorrhage.

The fundus changes may, according to de Schweinitz⁸, who has written extensively on this subject, be divided into those which are suggestive and those which are pathognomonic. Among the suggestive signs he includes uneven caliber and undue tortuosity of the retinal arteries, increased distinctness of the central light streak, an unusually light color of the breadth of the artery and alterations in the course and caliber of the veins. The pathognomonic signs are, of course, the important one and to these we wish especially to refer.

The first as well as the most important changes to be observed in the eye in arteriosclerosis are in the retinal vessels.

Tortuosity of the vessels is only suggestive and is of importance only when associated with other signs.

Irregularity in the caliber of the retinal arteries points more strongly toward angio-sclerosis of these arteries. Sometimes a vessel may be of normal caliber for a distance, then be narrowed slightly even to a mere thread and later broaden out again to normal width. Alternate constriction and widening of a vessel may give it a well defined beaded appearance.

The light reflex from the arteries may appear more distinct and exceptionally bright with an unusual light color of the entire breadth of the artery. This brighter reflex is seen not merely in the vessels about the disc as in other conditions, in fact it is usually the secondary and tertiary branches of the central artery that are mainly affected. This increased brightness of the light streak gives rise to the term "silver wire" arteries sometimes used in describing them.

Another sign is loss of translucency in the vessels as manifest where an artery crosses a vein. In the case of an overlying vein the opposite effect may be produced, the artery may be seen more clearly than usual, due in part to the increased brightness of the arterial reflex and partly to the thickness of the venous blood stream being somewhat less at this point.

Most important of all these signs is the influence of the arterial pressure on the venous blood stream. This is shown most frequently by compression of the vein by the overlying artery. This appearance might be roughly compared to that seen if a small rod is laid across a piece of rubber tubing, which would show indentation or compression from the metal rod. Normally no such compression of the vein is caused by an artery resting upon it, but when the artery is sclerosed or hardened, it will produce visible changes in the vein. At first the vessel may appear to be slightly pushed aside. Later definite

pressure is apparent and still later evident interference with the venous blood current becomes manifest as shown by the enlargement or ampulliform dilatation of the vein to the peripheral side of the point of crossing. When the vein crosses the artery it may appear flattened out or slightly elevated, possibly losing its light streak but permitting the artery to be seen more readily than normal through it. There may also be increased tortuosity of the veins and alternate contractions and dilatations.

Often in the early stages this flattening of the veins where crossed by the arteries with possibly the "silver wire" appearance of the arteries may be the only indication of changes in the retinal arteries, though deSchweinitz⁹ says two other signs may commonly be seen very early, "markedly corkscrew appearance of certain arterial twigs, either of those which skirt the macula or more significantly of one or more small branches which arise from the larger vessels of the main distribution which themselves may be apparently normal," and a "congested" appearance of the nerve.

White lines may appear along the vessels which must be distinguished from the perivascular lymph sheaths often marked on or near the discs in healthy eyes. These may be due to two changes, an endothelial proliferation or a thickening of the connective tissue coat. "This distinction may be of importance," says Coats, "as the two conditions may be due to different causes." The first or endothelial proliferation indicating disease of the intima is most probably due to toxins circulating in the blood, which would most naturally affect the intima, while the thickening of the connective tissue is probably a strengthening of the wall to compensate for increased blood pressure.

Edema of the retina may become manifest as a grayish opacity about the nerve, or in the macular region, and along the course of one or more vessels or in small spots in the periphery; and also hemorrhages which may be very small and few in number or even solitary, linear in type along the vessels, or round spots scattered over the fundus or sometimes large ones of the so-called subhyaloid character.

In a study of the relation between retinal hemorrhages and high arterial pressure in one hundred patients, Fox and Batroff¹⁰ found that eighty per cent of the individuals with retinal hemorrhages present were suffering from a temporary or permanent high arterial pressure, so that they were led to believe that the excessive pressure is apparently the most frequent exciting cause of hemorrhages. In regard to the clinical diagnosis they recorded chronic interstitial nephri-

tis in forty per cent; arteriosclerosis in twenty-seven per cent, and chronic parenchymatous nephritis in thirteen per cent. White or yellowish patches of exudate may also appear and as the disease progresses we have the picture of advanced arteriosclerosis. We now may have exudate in the retina without or with hemorrhages which may be more or less extensive, with greater or less edema of the nerve, in fact all the signs of a typical albuminuric retinitis. In one case the exudate in the retina may be the prominent characteristic, in another the retinal hemorrhages and in another the nerve changes or we may have any combination of these.

While the signs in the early stages of the disease may be difficult of observation and can be detected only by an expert and then sometimes only when the pupil has been dilated, in the late stages the changes can be readily seen by any one who can use the ophthalmoscope, but unfortunately they are not so valuable at this stage for the welfare of the patient, as the disease has already progressed to a point where relatively little can be done for it.

Two important manifestations, both obstructive, of vascular diseases are thrombosis of the central vein or any of its branches and so-called embolism of the artery or its branches. While we may have thrombosis of the central vein in young subjects with no signs of arteriosclerosis in the other eye or elsewhere in the body, we are here concerned with the type which occurs in elderly persons with general arteriosclerosis and usually also albumin in the urine. While this condition per se seems according to Coats to afford very little information with regard to the prognosis for life, in several of my patients there has within a comparatively short time been a stroke of paralysis.

A fact important to bear in mind is that glaucoma not infrequently develops in these eyes with thrombosis of the central vein, and the danger of this should be borne in mind if you use a mydriatic in making the ophthalmoscopic examination.

Obstruction of the central artery is mentioned as so-called embolism for the reason that at least the majority of these cases which have been looked upon as embolism are, as shown by autopsy, not due to embolism, but to an endarteritis or thrombosis.

Spasm of the retinal artery is an interesting, but rare manifestation of this disease, occurring most frequently, according to Greenwood¹¹, in the early stages of arteriosclerosis and should be looked upon as a warning of future obliterating endarteritis. While cases of probable spasm of the retinal arteries have been met with by many observers, very few have had the oppor-

tunity of examining an eye during the attack. Wageman and Benson report seeing single attacks and Sacks a spasm of a branch of the central artery, and Zentmayer¹² describes a case in which he saw the patient in not merely one but numerous attacks from the beginning to the end—the oncoming spasm, the occlusion of the vessels and the relaxation, with the accompanying symptoms—the obscuration of the field beginning in the periphery, the totally dark field and then the gradual clearing which also began in the periphery.

Various lesions of the optic nerve are at times found associated with or due to arteriosclerosis. I have already referred to the congested nerves which deSchweinitz speaks of as one of the early signs. I have observed several cases of edema of the optic nerve and in particular recall a recent case in which the edema of the nerves preceded the retinitis.

Retro-bulbar neuritis may also occur, of an acute type as in a case very recently seen by myself or in the chronic form. Marcus Gunn points out that irregularity in the caliber of the retinal arteries is often associated with retrobulbar neuritis and believes it reasonable to suppose that the small branch from the central artery of the retina which supplies the axial fibers of the nerve near the papilla may, by its degeneration, affect the nutrition of these fibers and so produce the ordinary symptoms of retro bulbar neuritis.

Zentmayer¹² reports a case of optic atrophy where arterio-sclerosis appeared to be the primary cause of the degeneration, and Bull¹³ thinks we may have a pressure atrophy of the optic nerve—either local, involving only certain fibers with resultant scotoma, or general from sclerosis of the ophthalmic artery. He also is of the opinion that some of the cases of so-called simple chronic glaucoma are in reality cases of atrophy of the optic nerve due to retro bulbar arterio-sclerosis of the internal carotid or ophthalmic artery or the anterior cerebral artery which by pressure on the optic nerve posterior to the foramen has caused the descending atrophy.

Arterio-sclerosis or increased blood pressure is not uncommonly met with in glaucoma, especially the hemorrhagic form, and we have already referred to the glaucoma which supervenes upon thrombosis of the central vein of the retina, a lesion closely associated with angio-sclerosis. Brailey and Edmunds found the arteries diseased in sixteen out of seventeen eyes excised for hemorrhagic glaucoma and more recent investigations will, I believe, sustain these conclusions. Knapp, as quoted by Suker,¹⁵ says: "Glaucoma

is not so much a consequence of faulty development, but rather an inflammatory affection which in all probability develops as the result of a chronic organic disease and here I think vascular sclerosis is the most likely cause, and if there are more causes than one, this one appears the most frequent. This agrees also with pathologic investigation and while arterio-sclerosis does not forcibly produce glaucoma, it may easily prove a powerful predisposing condition." In any type of glaucoma the condition of the blood vessels and the arterial tension should be studied and the presence of an arterio-sclerosis or an increased blood pressure may have an important influence in the line of treatment. Dunn,¹⁶ in a recent article, dwells upon the practical value of this in treatment not only of glaucoma, but also of various other diseases of the eye.

The possibility of arterio-sclerosis should be thought of as a causative factor in certain affections of the choroid, especially of the degenerative type. Parsons²⁰ says: "Special forms are seen usually associated with general disease of the vascular system. The arteries are most affected, showing hyaline degeneration of their walls, perithelial proliferation, miliary aneurisms, hyaline thrombi, endarteritis obliterans and arterio-sclerosis," and Lawford,²¹ in his recent address before the American Academy of Ophthalmology upon the etiology of choroiditis, states that "the vascular changes in the form of widespread arterio-sclerosis, which are so well known in the late stages of syphilis and which are among the most serious, results of that fell disease not infrequently lead to choroidal changes of a degenerative type."

It will appear reasonable that paralysis of one or more of the ocular muscles might be caused sometimes by pressure upon the nerves from a sclerosed vessel at the base of the brain. Pechin and Rollin¹⁷ report a case of left sided external ophthalmoplegia complete and total, and on the right side partial ptosis and paralysis of the superior rectus in which the postmortem examination indicated that the paralysis was probably due to pressure of the sclerosed carotid artery, which in its course along the cavernous sinus compressed the nerves along the outer wall. Of course we all recognize as a possible cause of such paralysis an hemorrhage from a rupture of a sclerosed vessel.

Gunn and many other oculists have noticed the frequency of lenticular opacities in eyes showing arterial changes and suggested that the ciliary arteries may be similarly affected and the nutrition of the lens thereby suffer. Green,¹⁸ of Dayton, who has a large experience at the

Old Soldiers' Home, recently published the results of his investigation concerning the associations of age and incipient cataract with normal and pathologic blood pressure, showing as he believes the rise in the percentage of cataracts with age is greater in those with pathologic than in those with normal blood pressure.

While I have nowhere observed any suggestion upon a possible relation in some cases between vitreous opacities and sclerosis of the ocular vessels or increased blood pressure, I am led to believe from my own experience that this subject is worthy of further consideration and observation. Certainly I have in some instances met with such opacities in angio sclerotic individuals, in some cases where the vitreous opacities were evidently due to readily observed intraocular lesions and hemorrhages, but in other cases where no such macroscopic lesions could be observed with the ophthalmoscope. The sclerosis of the ocular vessels by interfering with the nutrition of the eye might readily account for such opacities in some cases. The possibility of arterio-sclerosis as the cause should be considered in the obscure cases of recurring hemorrhages in the vitreous.

While subconjunctival hemorrhages are often of no significance and are found in individuals apparently perfectly healthy, recurring hemorrhages of this type should suggest the possibility of such arterial changes and should lead to thorough examination of the circulatory system and also of the urinc. As de Schweinitz says in speaking of these subconjunctival hemorrhages, "They are the little leaks announcing that a greater break is not far off."

The writer just mentioned also refers to cases of persisting asthenopia occasionally seen, especially in women in the late forties, which do not yield to optical treatment but are not infrequently relieved or materially modified if the high arterial tension is lowered by proper dietetic measures and particularly by the use of nitroglycerine.

A few cases will serve to illustrate some of the points brought forward in this paper:

Case 1.—This case shows the value of the fundus findings as a means of differential diagnosis between brain tumor and arterio-sclerosis.

Mrs. S., age fifty-four, was sent from a neighboring town to a surgeon in one of our hospitals with a diagnosis of brain tumor for operation. Sight is said to have failed rapidly in 1904. In March, 1905, she had her first convulsion, which has been followed by others at varying intervals. A physician who examined her eyes thought there was an optic neuritis in the left eye but not in

the right. Her vision was O.D. 6/60 O.S. 6/12. Speech was always worse after these attacks and both it and her memory had been getting worse so that now she has difficulty even in telling her name and age. She thinks the vision is getting worse, but when I first saw her November 1st, 1906, it was the same as that recorded by the other physician one and a half years previously. There was no headache nor vomiting, pupils were equal and responded to light. The form fields were normal and all movements of the eyes were good except convergence, which could be accounted for by the poor vision of the right eye. The urine was normal. Ophthalmoscopic examination showed in the right eye very brilliant light reflex from the arteries, veins full and tortuous and some of the small veins especially tortuous, veins definitely compressed by overlying arteries at points of crossing with slight dilatation of some of the veins beyond the point of compression and one small hemorrhage in the macula. The left eye showed similar condition except there was no hemorrhage. There was no swelling whatever of the nerves nor any evidences of secondary atrophy. Although the absence of papillitis in cases of suspected brain tumor is only of negative value, I expressed the belief that the condition was due to arterio-sclerosis of the cerebral vessels with probable degeneration. A neurologist was also called in consultation and he thought the symptoms warranted a diagnosis of brain tumor despite the absence of ocular symptoms and advised operation. The operation was accordingly made, but no evidence of tumor were found. The patient later died, and at the autopsy there was found to be marked arterio-sclerosis of the cerebral vessels and no brain tumor.

Case 2.—Mr. F. H., age fifty-four, an active business man, consulted me in September, 1907, because he thought that his reading glasses, which he had gotten from an optician, needed to be changed. With the proper correction normal vision was readily obtained in each eye. Ophthalmoscopic examination showed the veins rather full and at several points compressed by the overlying artery. The caliber of several of the arteries varied slightly, being more narrow at some points. There were no hemorrhages nor any lines along the vessels, in fact nothing else pathologic. I had asked him in regard to his general health, which he said was excellent, in fact could not be better. I found his pulse full, tension high. When I told him his retinal arteries gave evidence of arterio-sclerosis, he acknowledged that he had been under Dr. Sawyer's care for some years for this condition and that six years ago he had been sent to see Dr. Jane-

way, of New York. His urine was normal. He is a rather heavy eater, but does not eat red meats, pastry nor various other proscribed articles of diet, does not use stimulants nor smoke, but works at very high pressure and takes no exercise. Since then he has had a slight attack affecting his speech for a time, and has also been ill with pneumonia. He has lost much in weight. His heart is weak. Fundus shows same appearance.

Case 3.—J. H. M., age sixty-four, consulted me for reading glasses in May, 1907, with a history that his general health was excellent. With the correcting lenses the vision was normal in each eye and the correction gave him excellent reading vision. Ophthalmoscopic examination showed in the right eye one small white patch looking like retinal exudate partially concealing the vessel. The light streak from the vessels was more pronounced than usual and at several points the veins were compressed by the overlying artery. The left eye showed the same condition of the vessels, but no exudate. There were no hemorrhages in either eye. Pulse was full, somewhat arrhythmic, tension rather high. I reported my findings to Dr. Cushing, who informed me that two years before the patient had had a slight hemiplegic attack, due he thought, to cerebral arterio-sclerosis. This attack rapidly cleared up. Later when I saw him again there was an appearance of one very small retinal hemorrhage in the right eye.

Case 4.—J. D., age sixty-nine, consulted me in October, 1908, with the history that several months before he had had a slight stroke affecting his speech. He has noticed some blur before his eyes, which is worse since the attack. Ophthalmoscopic examination revealed marked signs of arterio-sclerosis, some small arteries and veins very tortuous, very marked compression of the veins wherever crossed by an artery with dilatation of the vein beyond the point of pressure. Several small round hemorrhages in the right eye and more numerous ones in the left and in addition in the right eye a slight edematous appearance of the optic nerve. The right eye also showed a central partial scotoma, indicating a retro-bulbar neuritis. All his peripheral vessels showed marked arterio-sclerosis and his physician, Dr. Lichty, reports blood pressure 180 to 190, albumin and casts in the urine—an interstitial nephritis. He died December 27, 1908, from cerebral hemorrhage.

Case 5.—Mrs. K., age forty-five, consulted me in August, 1908, because of a blur before the left eye, which had come about three weeks previously. She was feeling finely and thought herself in

the best of health. With glasses vision was with the right eye 6/9, with the left 6/45. Ophthalmoscopic examination showed in O.D. the nerve slightly prominent or edematous with all edges hidden, and in O.S. decided swelling of the nerve, one hemorrhage on the nerve, but none elsewhere, and several indistinct pale spots of exudate. The form field was normal in the right eye, while in the left there was an absolute scotoma to the outer side of fixation. She was sent to her family physician, who reported nothing abnormal, but a faint trace of albumin in the urine. Two days later the swelling of the optic nerves appeared more marked in each eye and in the left there was a fresh hemorrhage and in the macula some white patches of exudate. When I saw her a month later her physician had told her the urine was now normal. She was feeling finely. Ophthalmoscopic examination showed an increase in the fundus changes. In the right eye the nerve still appeared edematous, the arteries showed variations in caliber and very pronounced light streak. In the left there were no hemorrhages. There was still slight edema of the nerve and much exudate all around it, while in the macular region the patches of exudate had increased and taken a somewhat star shaped arrangement usually so characteristic of albuminuric retinitis. The pulse was full and bounding. I sent her to another physician in consultation, who confirmed my suspicion of arterio-sclerosis. Blood pressure was 250, the apex of the heart three fingers breadth beyond the nipple line, no albumin in urine. Here was a case of a very marked and serious type of arterio-sclerosis, and yet she is the picture of health and says she feels as well as she looks and would not think of consulting a physician except for her eye. It is needless to add that the prognosis in her case is decidedly bad. Saw her again January 21, 1909, when vision with O.S. was 6/9 partly. There is still an enlarged scotoma at the normal blind spot, but no color scotoma between it and fixation as before, edema of the nerves decidedly less, spots of exudate much less numerous and no hemorrhages.

Case 6.—C. M., age forty-eight, consulted me in July, 1906, because of a slight blur before the left eye. I had seen him at various times for eight years, but had found healthy eyes and normal vision, though he had complained of muscae volitantes. I now found the right eye healthy, but in the left some retinal hemorrhages near the macular region and below it, and several patches of white exudate. He was referred to Dr. Season, who reported arterial tension 180, heart normal, a trace of albumin and a few casts in the urine, which had a specific gravity of 1010. He stopped

work and was put upon proper treatment and regimen with the result that three months later the eye had much improved, the exudate and hemorrhages had almost disappeared and vision had increased from 6/12 to 6/7.5. I did not see him again after that, but recently learned that his arterio-sclerosis had gradually improved, but in July, 1908, he died of acute tuberculosis following pneumonia.

Case 7.—A. B., age fifty-four, consulted me in July, 1906, for glasses. An ophthalmoscopic examination without a mydriatic was negative. With the proper lenses he had normal vision in each eye. In March, 1908, he had an attack of aphasia, flaccid paralysis of the right arm and spastic of the right leg with some spastic movements. His physician, Dr. Cushing, thought it might be a cerebral tumor or else an embolism and called me to see him the following morning. Examination of the eyes was negative so far as any symptoms of cerebral tumor were concerned. The pupils were so small that the vessels could not be studied carefully. Several days later he was again seen and the pupils then were dilated for a more thorough ophthalmoscopic examination, which revealed some fine floating vitreous opacities in each eye and at several points in each, more especially in the left, compression of the veins by the overlying arteries. Subsequent history would tend to confirm the diagnosis suggested by the ophthalmoscopic appearances, cerebral hemorrhage or embolism consequent upon arterio-sclerosis of the cerebral vessels. This man was a tremendous worker, lived a very simple life, was not a heavy eater and did not use stimulants.

Case 8.—C. T., age fifty-nine, was first seen in January, 1893, for glasses. Vision of O.D. ability to count fingers. This had been poor all his life. O.S. 6/18 and with glasses 6/6. In January, 1904, he called again with the history that when he awoke that morning the right eye was blind. Ophthalmoscopic examination showed the right nerve edematous and pale with all edges hidden and several pale spots in the macular region. Medical examination revealed marked arterio-sclerosis, slight hypertrophy of the heart and slight trace of albumin in the urine. Later examination in May under a mydriatic, when the retinal edema had subsided, showed the nerve of this right eye very pale, arteries and veins both contracted. In the artery extending down from the disc the caliber suddenly becomes much narrowed. At this point is a pale spot in the vessel looking like an obstruction and beyond this point the vessel can barely be made out as a faint line with some white streaks along it. Near the

periphery the artery can again be more easily seen. The case was one of so-called embolism or thrombosis of a branch of the central artery of the retina.

Case 9.—Mr. B., age fifty-three, consulted me in December, 1894, because of blurred vision of the right eye of four weeks' duration. Ophthalmoscopic examination revealed a thrombosis of the upper temporal vein a short distance from the nerve with extensive hemorrhages throughout the distribution of the vein. The thrombosis took place just where an artery crossed and compressed the vein. There were retinal hemorrhages also in the other eye. His physician, Dr. Bernstein, at first reported the urine negative, but later found a trace of albumin and some casts. Arterio-sclerosis was well marked. Seven months later a thrombosis occurred in another vein of the same eye. Extensive vitreous opacities developed. In March, 1902, the patient had a stroke of paralysis.

Case 10.—Mr. L., age fifty-nine, consulted me November 16, 1904, because of blurred vision before the right eye. Vision O.D. 6/60 O.S. 6/6. Ophthalmoscopic examination revealed thrombosis of the upper temporal vein a short distance from the nerve with extensive hemorrhages, and exudate in the area of distribution of the vein. The veins showed marked compression by overlying arteries, form field was markedly contracted below, especially down and in. The urine showed a trace of albumin. Arteriosclerosis was marked. Two months later, January 26, 1905, he had a cerebral hemorrhage while visiting the dispensary, and died the same day in the hospital.

Case 11.—Mrs. P., age seventy-five, consulted me in May, 1907, with blurred vision of the right eye. I had previously seen her and found the left eye totally blind from old chronic glaucoma. Ophthalmoscopic examination now revealed the typical picture of thrombosis of the central vein of the retina. She was referred to Dr. Hoover, who reported a slight trace of albumin in the urine, which had a specific gravity of 1023, hypertrophy of the heart and aortic insufficiency and arterial tension 250.

Case 12.—K. J., age forty-eight, consulted me in January, 1898. Vision O.D. 6/60 O.S. 6/45. Ophthalmoscopic examination showed vitreous opacities in the right eye and in the left several retinal hemorrhages. She was seen several times subsequently with recurring hemorrhages in the vitreous. The urine showed some albumin. In 1902 there were still extensive vitreous opacities in the right eye and retinal hemorrhages in the left. The arteries and veins were both tortuous

and the arteries caused definite compression of the underlying veins.

Case 13.—B. G., age sixty-eight, consulted me in December, 1901, for paralysis of the left ocular motor. Medical examination showed marked arterio-sclerosis, enlargement of the heart and a slight trace of albumin in the urine. The fundus examination was negative. There was nothing else in the history so far as we could learn nor in the physical examination other than the arterio-sclerosis to account for the ocular motor palsy.

Case 14.—Mrs. C. L. H., age sixty-three, consulted me March 17, 1909, for some confusion of vision when she looks downward. She always had good eyes, and with the proper lens readily obtains normal vision in each. Examination of the muscles shows a paralysis of the right superior oblique and the ophthalmoscope reveals compression of the veins by the overlying arteries and in the left eye one small linear retinal hemorrhage. Dr. Season reports arterio-sclerosis, arterial tension 235, a large amount of albumin in the urine with granular and hyaline casts and an enlarged heart.

Case 15.—Mrs. J. W. M., age sixty, consulted me February 9, 1909, with a history that for several years she has been having recurring subconjunctival hemorrhages. They have been especially frequent the past few months and in each eye can now be seen some small ones. The eyes give her no trouble. Her glasses are correct and vision with them is 6/5 in each eye. She is under Dr. Hoover's care, is on a strict diet and leading the "simple life." A year ago her blood pressure was 185 to 190, now is about 160. The urine shows a slight trace of albumin, which is only secondary. Ophthalmoscopic examination shows only two points of apparent slight compression of the veins by the overlying arteries and some tortuosity of the small vessels skirting the macula.

Case 16.—C. K., age fifty-four, consulted me for severe frontal headaches not relieved by any treatment. Refraction—

O.S.+ .50^s V.=6/12

O.S.+ .50^s V.=6/6

reading best with +2.50^s added. Ophthalmoscopic examination shows the veins markedly compressed by the overlying arteries. Several arteries present variations in caliber and are decidedly narrower at some points. The light streak is very pronounced and there is marked tortuosity of the small vessels, especially near the macula of the right eye. Medical examination revealed a marked amount of albumin in the urine and arterio-sclerosis with a blood pressure of 220. As the glasses which he is already wear-

ing were correct, he was referred to the medical department for treatment.

Case 17.—J. T., age fifty-five, consulted me April 20, 1903, in regard to his glasses and also because of a slight chronic conjunctivitis. With the proper lenses O.D.+1.00^s and O.S.+1.25^s vision equals 6/5 in each eye and the fundus of each was healthy, except that at several points the vein showed slight compression by the overlying arteries. He was under Dr. Cushing's care, but I saw him from time to time. Nov. 21st, 1906, compression of the veins by the arteries was more marked, and in the left eye were two small retinal hemorrhages. June 11, 1907, complained of dizziness and was sleepy much of the time. The ophthalmoscope showed variations in calibre of the veins, one small hemorrhage in the left eye. The patient died March 10th, 1908, from arterio-sclerosis.

Case 18.—Mrs. H. K., age fifty-four, consulted me January 14, 1907, for glasses. An ophthalmoscopic examination showed slight compression of the veins by the overlying arteries. March 2, 1909, she came again to see if the glasses needed changing. Except for some indigestion, she says her general health is good. With the proper lens she readily obtains 6/5 vision in each eye. The ophthalmoscope now reveals decided compression of the veins by the overlying arteries, the veins slightly tortuous, increased light streak, variations in caliber of the retinal arteries and several small round and linear retinal hemorrhages. Pulse was full with high tension. She was referred to her family physician with the diagnosis of arterio-sclerosis, but unfortunately no complete report has as yet been received from him.

Case 19.—Mr. C. M. S., age sixty-six, came for glasses March 19, 1909. I had seen him five years previously for subconjunctival hemorrhage. He uses alcohol to excess and is subject to rheumatism. Radial and temporal arteries show marked arterio-sclerosis and tension is decidedly increased. Ophthalmoscopic examination reveals marked compression of the veins by the overlying arteries.

Case 20.—F. W. S., age thirty, consulted me January 25, 1909, because of a blur before the right eye, which came on five days previously. He gives a history of a similar attack three years ago, which gradually cleared up. He denies all specific history. General health has been excellent. He is very fond of athletics, was an instructor or coach for several years and has overstrained or overexerted himself. The interior of the left eye is healthy, but in the right there are extensive vitreous opacities, some more or less

organized, also fresh blood in the vitreous and numerous retinal hemorrhages. Vision O.D. 6/45, O.S. 6/5. Dr. Season reports a mild grade of arterio-sclerosis, blood tension 140 and slight enlargement of the heart (apex one inch to the left). The urine shows a faint trace of albumin and a few hyaline casts. Under treatment, medical and hygienic, vision March 10, 1909, had improved to 6/7.5 partly. The vitreous had become very much clearer so that now a good view of the fundus could be obtained. No change could be made out in the vessels, except possibly the light streak was more pronounced than usual and in the far periphery below was a white patch looking like exudate in the choroid.

In conclusion, it is evident therefore that the ocular manifestations of arterio-sclerosis are numerous and varied; but from the diagnostic standpoint, it is the group of signs which occur in the early stages of the disease that are especially important to the general physician. While it is true, as Stengel says, that "There are numerous and varied conditions of the system organic and nervous in origin that elevate blood pressure nearly constantly and in which arterio-sclerosis has no part, except perhaps as a consequence, and any of these conditions may occasion the symptoms of arterio-sclerosis," these ophthalmoscopic signs seen in the early stages are in the words of de Schweinitz "produced by no other condition except the persisting high arterial tension of arterio-sclerosis, and therefore eye ground examination is of paramount importance in the early recognition of vascular disease and may render signal aid in the interpretation of symptoms caused by derangement of the function of important organs, which in their turn are dependent upon sclerotic changes in their smaller vessels, although there is as yet no decided alteration in the general circulation."

Here is a field in which the oculist may be of material assistance to the general practitioner and again it suggests an important duty to the ophthalmologist, a duty upon which I would lay special stress as it is unfortunately all too frequently neglected. Many of these patients who think themselves in good health consult us for presbyopic correction, and a careful ophthalmoscopic examination, such as should always be made, will reveal the signs of beginning arterio-sclerosis, possibly only the very earliest signs, the tortuous vessels, increased light streak and indentation of the veins or possibly only the so-called suggestive signs. This is the time of all others when something can be done for these patients and they should be referred at once to their family physician or the proper expert who can

institute the necessary measures to avert the more serious stages of the disease.

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DISCUSSION.

Dr. Alcorn, Columbus: I think the value of this paper lies in the fact of the early diagnosis of arteriosclerosis by the oculist. I enjoyed the paper, in the fact that the essayist brought out in regard to the compression of the veins at a point crossed by the arteries. This fact I think has a great deal of weight in making a diagnosis, more so than when we have tortuosity of the vessels. I think this is one of the symptoms we should look for, and should be marked with other changes that take place in the fundus. We have other changes of the retinal artery before the changes of the fundus occur, as has been mentioned.

Dr. Stevenson, Akron: I had not intended to discuss this paper as I was so unfortunate as not to hear the first part. There are just a few things, however, that suggest themselves to me in the examination of these cases. The oculist should be

used to his ophthalmoscope in order to detect the smaller most important changes. The light should not vary in intensity. I believe it is a mistake to use too intense a light. As to the form of ophthalmoscope, I have found that occasionally there appear to be white streaks along the arteries, due to the use of an electric ophthalmoscope, whereas an ordinary reflecting instrument would show that none were present. Arteriosclerosis usually varies with the region. The general practitioner, without an ophthalmoscope, is practically limited in his examination of these cases to the larger trunks, e. g., the brachial artery, as to blood pressure. Some, through habits of life, as over indulgence in eating and drinking, may have these changes chiefly in the splanchnic areas, whereas the cerebral arteries may be nearly or quite normal. Others are chiefly affected in the cerebral arteries, and an examination of the fundus is very useful in these cases, because of the close connection of the cerebral and ocular arteries and lymph spaces.

D. T. Vail, Cincinnati: I enjoyed this paper very much and I think it is a very important subject. I see these patients in various stages of this trouble, and they always make a group of interesting studies. The essayist has well said that it is our duty as specialists to ascertain the earlier signs of arteriosclerosis, so that we may protect the patient and prolong his life. The oculist has a singular opportunity of studying the minute details of the circulation within the eye by the use of his ophthalmoscope, and it would seem there should be no chance for a wrong diagnosis. We see the appearance of the blood vessels noted by the essayist and they are always interesting and significant; but it occurs to me that there is often-times present a group of signs which precedes these grosser evidences of the trouble, and we should note them carefully and also note their significance.

Arteriosclerosis in the aged is often expressed by rosy-hued optic disks, by floating opacities in the vitreous and some other faint changes which I take as an indication that there is something wrong with the nutrition of the retina and choroid. Among these might be considered the changes of the macula lutea attending certain nutritional disturbances of the retina, which we have seen in cases which come to us complaining of metamorphopsia, obscurations of vision, and other visual disturbances. One of the most valuable tests, in my estimation, in determining the oncoming of arteriosclerosis, is the pupil test. You will notice that among the people past middle life there is a noticeable difference in the behavior of the pupil. Some will show a very ready response, even with the simple pupil reaction test. These patients are not apt to be troubled with arteriosclerosis. In other patients the pupil will be contracted and rigid. By making accurate and careful tests we find that the pupil scarcely responds, or at least very feebly, and if a drop of euphthalmin be put in the eye the pupil will not dilate to any great extent. This condition is almost pathognomonic of arteriosclerosis. The iris is but a vascular tunic, being composed almost entirely of fine blood vessels, and there we have a membrane in the forward part of the eye which we can see and study and which gives us very satisfactory evidence in these cases.

If I have any criticism to offer on this paper, I would say the essayist has dwelt more upon the trunks of the vessels than upon the terminal elements. In so doing he has adhered to his subject, but prior to such changes as he noted we may find alterations in the tone of the capillary circulations, changes in the capillaries themselves—capillary sclerosis, if you please. It is in the capillaries that we expect to find the first expression of the oncoming condition of general arteriosclerosis. The capillaries of the macula lutea, those bearing nutrition to the optic nerve, those of the choroid and those of the iris, are open to our gaze and from these we may first expect to gather our information in making up a diagnosis of arteriosclerosis.

THE REPORT OF ONE THOUSAND RECORDED OBSTETRICAL CASES WITHOUT MATERNAL MORTALITY.

ALFRED GAITHER, M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

In presenting this paper to you today I have no intention of offering you anything new in the way of obstetrical technique, but simply wish to show one thousand obstetrical cases for statistical purposes, cases of full term; I shall report no cases of prematurity.

These cases have come under my care during the past twelve years and have comprised three distinct classes of patients, consequently I have given to my paper the title "The Report of One Thousand Recorded Obstetrical Cases Without Maternal Mortality."

I would not for a moment claim there was anything remarkable in the fact that there was no *maternal mortality* in one thousand cases, were these cases cared for in good clean homes or maternity hospitals, but as I have said before, these cases, which I herewith report, I have divided into three distinct classes which must be considered separately.

Class 1. Women whose homes are clean and well kept; from the person of affluence, living in a handsome house, to the person of moderate means who lives in a small, but neat flat.

Class 2. Women who are cared for in hospitals.

Class 3. The poor women who live in dirty tenement houses, where cleanliness is unknown and therefore asepsis is impossible.

Of class one little is to be said for with the conveniences which these homes afford, the care of a *well trained nurse* and the luxuries and comforts which money can buy, together with a doc-

tor who is *clean*, there should be no *maternal mortality* unless some grave complication occurs, which as we all know is *possible*.

Of hospital cases, unless in a maternity hospital (by maternity hospital I mean a hospital that receives none but obstetrical cases, receives no *pus cases*, no medical or surgical cases) I believe that the chances for maternal mortality are far greater than in the cases of class one.

Of class three I hardly know how to express my amazement that the *maternal mortality* is not greater; whether the filth and dirt gives this class immunity or not, I do not know; but I do know, for some years past I have been a member of the staff of the Cincinnati Maternity Society and have had an opportunity of seeing *many* cases, which by all the laws of hygiene should never have risen from the bed alive.

Surely nature here asserts herself.

I have had many cases in the "Spencer House," "The Red Onion," "Papa John's" and in "Shantytown," where a clean sheet was unknown, and the patient had not been bathed in many months, to say nothing of the vermin which infested her.

Where an old crock was the only vessel in which I could wash my hands and then after washing up would only contaminate myself on coming in contact with my patient or the bed upon which she was lying.

Surely under such conditions and surroundings one could expect *high maternal mortality*.

In speaking of these maternity society cases I am giving simply the experience that *every member* of the staff has had, and there are at least twenty-five men, here in Cincinnati today, who at one time or another have been connected with the staff of the maternity society who will vouch for this statement.

My rule in these cases is the same that I scrupulously carry out in every case, of my obstetrical practice, to see that my *nails* are well cleaned and that my hands and arms have been well scrubbed, then soaked in a creoline solution.

That after the baby is born, the mother has an antiseptic vaginal douche, which is repeated daily, by the nurse, until I order it stopped.

While I know that many obstetricians of vast experience condemn the douche, claiming that the nozzle carries infection, I want to say right now and *put myself on record that I sincerely believe* that the douche properly given is a boon to womanhood after going through the ordeal of childbirth; I not only believe this but I know that the warm antiseptic fluid relieves the soreness of the parts that have been contused, and that the odor of the *lochia* discharge (which is

so offensive to some sensitive women) is greatly lessened.

The claim of carrying infection by the douche nozzle (if properly handled is *absurd* and the sooner the general practitioner (who takes occasional obstetrical cases) realizes this the better it will be for his patients as well as for himself.

I use a clean *glass vaginal nozzle* attached to the tube of the douche bag containing *hot water*, in which creoline or lysol has been added in small quantities, preferably creolin one-half dram to two quarts.

In many forcep cases, or if my hand has been in the uterus, I invariably give an intrauterine douche of creolin solution *myself* immediately after the delivery of the placenta, using an irrigator which enables a free return flow of the fluid through the cervical canal.

The one thousand cases that I shall now report consist of:

Class 1—Women in affluent or comfortable circumstances financially	510 cases
Class 2—Women in hospitals	270 cases
Class 3—Women in dirty tenements	220 cases
	<hr/> 1000 cases

My records show that there were 19 cases of twins which consisted of 16 male and 22 female children.

The other cases represented 551 male children and 430 female children.

That these cases at the time of labor were in the following positions:

Left occipito anterior	754
Right occipito anterior	30
Left occipito posterior	21
Right occipito posterior	72
Mento occipito posterior	3
Left sacro anterior	40
Right sacro anterior	12
Left sacro posterior	28
Right sacro posterior	21
	<hr/> 981
Twins	19
	<hr/> 1000

Of the twins 22 children were vertex and 16 children were breech.

Of these cases 93 were instrumental.

Ninety-two vertex and one case where forceps was applied to the breech.

Placenta previa centralis	9
Placenta previa marginalis	7
Puerperal eclampsia	3
Postpartum hemorrhage	7
Stillborn children	36

CAUSE OF STILLBIRTH.	
Unknown	6
Strangulated cord	22
Cerebral hemorrhage	3
Asphyxiation	1
Hemorrhage pla. pre.	4
	<hr/> 36

Of these two were spina bifida.

The maximum age of these patients was 55 years, 4 months.

The minimum age of these patients was 12 years, 2 months.

Several of these cases were especially interesting to me and I shall take a little more of your time, gentlemen, in describing them to you.

September 30, 1901, I was engaged by Mrs. E., a primipara 32 years of age, to care for her in her coming confinement which was due theoretically December 3.

October 17, 23, 31, November 6, 13, 20 and 27, I examined her urine. No albumin or casts, sp gr. normal.

Sunday, December 1, at 2:50 p. m., I was called to her house and found labor progressing nicely. About 5 p. m. the pains became less frequent and from 6 to 7 p. m. they were irregular and of no force.

At 8 p. m., no progress having been made since 7 o'clock, I told her husband and mother that unless things greatly improved by 9 o'clock I would terminate the labor.

At 8:20 p. m., while getting my instruments so the nurse could sterilize them I was startled by a cry from the patient, and jumping over to her bed found her lying in the opisthotonos position, frothing at the mouth and was having a violent convulsion. While the nurse hastily anesthetized her with chloroform, I applied my forceps and delivered her of a stillborn eight pound twelve ounce boy. After the delivery of the placenta Mrs. E. was placed in a hot pack.

At 9 p. m. the pulse being 180, gave 10 min. Norwood's tinct. Viratrum viride hypodermically and repeated every half hour until four doses had been given when the dose was cut to 5 min., given at same intervals until 2 a. m., when pulse was reduced to 80 beats.

Mrs. E. was kept in a hot pack for 36 hours after which time her kidneys worked freely, but it was necessary to catheterize her for the next three weeks owing to her inability to void her urine naturally, and she had an ugly cystitis which in time yielded to treatment.

Dr. G. M. Allen, of Mt. Auburn, was called in consultation by me and arrived in the room as I extracted the head of the child.

Now, gentlemen, here is one thing I wish to call your attention to. This patient's urine was

analyzed weekly for seven weeks prior to her confinement, with the finding that *albumin* and *casts* were absent.

At 2 a. m., after her delivery, she was catheterized and the urine examined. Sp. gr. 1020, no albumin, no casts. At 9 a. m., December 2, the sample of urine showed sp. gr. 1022, considerable albumin, no casts.

Dec. 3—Sp. gr. 1010 No albumin, no casts.
Dec. 4—Sp. gr. 1010 No albumin, no casts.
Dec. 5—Sp. gr. 1016 Trace albumin, no casts.
Dec. 6—Sp. gr. 1024 No albumin, no casts.
Dec. 7—Sp. gr. 1022 No albumin, no casts.
Dec. 9—Sp. gr. 1026 High in albumin, no casts.
Dec. 10—Sp. gr. 1026 No albumin, no casts.
Dec. 11—Sp. gr. 1026 No albumin, mucus.

From December 12 to January 15, sp. gr. ranged from 1010 to 1026, but no albumin. In this case we had had a convulsion with *no* albuminuria prior to confinement or indication that the urea was not being eliminated, and with albumin in the urine *but twice* after her confinement, 22 urine analysis being made during the first month.

This convulsion was undoubtedly uremic.

In conjunction with this case I wish to show another.

September 10, 1907. I was engaged by Mrs. S., primipara, aged 30, who was due February 25, calculated time.

January 31, 1908. Sp. gr. 1016, *albumin high*, urine almost solidified in test tube, so instructed Mrs. S. about her diet; had her drink freely if imported vichy, take two hot baths a day and keep up free cartharsis.

Feb. 1—Sp. gr. 1030 Albumin high.
Feb. 3—Sp. gr. 1020 Albumin high.
Feb. 5—Sp. gr. 1008 Albumin medium.
Feb. 7—Sp. gr. 1008 Albumin trace.
Feb. 10—Sp. gr. 1012 Albumin medium.

Was called to this case about 3 a. m., February 17. Pains regular and hard and at 6:40 a. m. Mrs. S. gave birth to a six pound ten ounce boy.

Feb. 18 urine showed sp. gr. 1012, high in albumin.

Feb. 26 urine showed sp. gr. 1036, medium in albumin.

March 3 urine showed sp. gr. 1018, medium in albumin.

March 7 urine showed sp. gr. 1018, low in albumin.

March 12 urine showed sp. gr. 1022, low in albumin.

Mrs. S. had an uneventful recovery and when last I saw her was in good health.

These cases are interesting to me from the fact that Mrs. E., who was apparently in the most perfect physical condition when she went into labor, *had a convulsion* and almost died, and Mrs. S., who had albuminuria and for whom I feared the gravest difficulties had a short and easy labor.

These patients belong in class one.

Mrs. H., multipara, 36 years of age, was sent to the Miami Maternity Hospital August 8, 1899, by Otto Juettner. Mrs. H. had been in labor since the morning of the sixth and was in an exhausted condition. Examination showed the child in L. O. A. position, also a shortening of the anterior-posterior diameter.

Chloral hydrate was given with little effect.

Her pains were not severe, but of the nagging kind, so Mrs. H. had little rest that night.

At 6 a. m. I applied forceps in the presence of Drs. W. H. Taylor, Otto Juettner and G. L. Bailey. Forceps were unavailing, so podalic version was made and Mrs. H. was delivered of a stillborn child. Uneventful recovery. This case belongs to class two.

March 6, 1902, I was called to see Mrs. R., multipara, aged 27, who lived in a filthy tenement house on West Front street. Found the os thoroughly dilated so ruptured membranes and a thick brownish fluid escaped.

The pains were forceful and in a short time a fine healthy male child was born, which was quickly followed by a frightfully macerated male child.

There was one placenta and one set of membranes.

The cord from the first child was centrally implanted while the cord from the macerated child was attached to the margin of the placenta. Uneventful recovery. This patient belongs in class 3.

After careful consideration of all the cases herein reported I have come to the conclusion that the agitation I have heard about sending *all* obstetrical cases *to hospitals* is without reason as there is no necessity of taking a woman from a *clean* home and her family simply to be confined, unless it is a matter of convenience for the patient or the doctor.

Neither a general hospital, nor a private hospital, nor even a maternity hospital offers any material advantages over the patient's own home where she will be happier, more comfortable, watched more carefully (by her loved ones) than any other place on earth.

DISCUSSION.

Park L. Myers, Toledo: I cannot allow that last sentence go by without accentuation. "The home of the patient, however homely"—no matter how lacking in the necessities of culture, so-called; no matter how many vermin; no matter how many microbes—"the home of the patient surrounded by her loving friends and family, proves by this analysis to be the finest place on earth in which to bear a child."

I have but recently come from a tropical country, where I saw many mothers, with swarms of

children, all living in the humblest of homes, often hovels, without hygiene, without sanitation, without syringes, without antiseptics, without infections, and according to the local physicians, with very rare puerperal mortalities. Surely luxurious homes, silks and antiseptics do not make facile reproduction.

We need to remember the truth—that a woman's own bacteria do not harm her or her child. The experiments at the Pennsylvania Hospital settled that years ago. Saprophytic bacteria swarm in the vagina. Colonies of pathologic bacteria introduced, soon die out and disappear. But if the vagina be thoroughly cleansed of its mucus and bacteria, and then pathologic bacteria introduced, they thrive and soon show the results of infection. Too often at confinements the attendants have been the unwitting introducers of strange bacteria—of infection.

I have but unstinted praise for the doctor's paper, for his acute observations, and his timely classification of his patients. Let me only add, as a kindly suggestion in the interests of natural science, that in his future 1000 cases he omit the creolin douche as a routine in all normal cases.

Wm. D. Porter, Cincinnati: I was much interested in the paper. I would like to discuss several portions of it but the hour is late.

The paper has certainly demonstrated that it is possible to use vaginal douches in a large number of cases without doing harm. In very severe vaginal injuries, which cannot be completely repaired, I usually resort to douches. I use the normal salt solution and believe that it is as efficient as the antiseptic solution. I would like to inquire in what class Dr. Gaither used douche principally.

Magnus Tate, Cincinnati: I cannot let this paper with its statistics so carefully compiled go by without saying a few words, and I will take just one part of it for discussion, namely, that of the douche. What I say is not in the nature of a criticism, but along the line of personal experience. A douche should not be given following a normal labor as there is always unnecessary danger of a resultant infection. I believe that the work of well known obstetricians will bear me out in saying that the mortality is less in normal cases when the douche is not used. This does not apply to cases where it is necessary to resort to instrumental or manual delivery. When we think for a moment how marvelously nature protects the patient from sepsis, first before labor by means of the cervical mucous plug, during labor by the passage of amniotic fluid, the child, placenta, membranes, and blood, and then the alternate contractions and relaxations of uterus, it seems to me that introduction of the douche solution should be classified more as meddling with nature. The essayist is very fortunate in his results, and I commend his paper for the manner in which he has compiled his interesting cases and statistics.

C. C. McLean, Dayton: Did Dr. Gaither have any cases of sepsis in series reported?

Alfred Gaither (closing): Regarding the douche in my paper I will say that I believe in it if it is given properly. I do not mean to introduce

the nozzle of any common syringe into the vagina. I have two or three good nurses who have done this work for me for years and they are experts. So far I have not met with infection through the douche nozzle. The main point in giving it is to make the patient more comfortable. If I have heard one patient say, I have heard fifty say, "She felt so much refreshed after the douche." I never have had any bad results and see no reason for discontinuing its use. In 1000 cases 510 were in private houses. These patients claimed they were much more comfortable after the douches: 270 were in the hospital; 220 in the slums. Is not this sufficient to indicate that there is no damage done by douching? I can see no reason for discontinuing the douche after using it in all these cases without bad results. I am just as set in the use of the douche as some of my friends are in not using it.

In answer to Dr. Porter's question as to what class I have employed douches in principally, I will say all classes. In answering to Dr. McLean's question about sepsis in these cases, I will state that I have had no sepsis.

A Final Word on Tubercle Bacilli in the Blood.

—About one year ago Rosenberger advanced his theory that tubercle bacilli are in the blood in considerable numbers in practically all cases of localized tuberculosis. But since then systematic study of the blood in tuberculous patients and in tuberculous cattle, coupled with appropriate animal experiments, have uniformly yielded wholly negative results in the hands of so many careful observers that Rosenberger's theory must now be dismissed as without any standing whatsoever. In place of marking a great step in the growth of our knowledge of tuberculosis, as was daringly prophesied, the "discovery in reality proves to be an insignificant episode of mere evanescent interest. Probably the same fate awaits the less noticed assertion in regard to the frequency of tubercle bacilli in the feces. An outcome of positive value from this work is the finding that water, even when distilled, may contain acid proof bacilli strikingly like the tubercle bacillus. That the use of such water in staining for tubercle bacilli under certain conditions may lead to error is self evident. Knowing this possible source of error, it will be easy to guard against it hereafter. Of theoretical rather than immediate practical bearing is the observation that even when very large numbers of tubercle bacilli are thrown into the blood stream they are removed from the circulating blood with astonishing rapidity.—
Jour. A. M. A.

Silkworm gut is easily dyed and incidentally impregnated with an antiseptic, by immersing it for twenty-four hours in a one percent solution of methyl violet, before the boiling.—Surgical Suggestions.

The Ohio State Medical Journal

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THE PHARMACOPEIAL REVISION.

One of the most important events of the year to the profession will be the meeting of the Pharmacopeial Convention in Washington next May. This convention will elect the revision committee and decide the policies to be followed in the approaching decennial revision of the United States Pharmacopeia. It is much to be desired that the entire medical profession should take an active part in this convention, to the end that the next pharmacopeia may be made more useful to the practitioner. In this way the pharmacopeia can be made one of the most potent instruments for the advancement of rational therapeutics. The Ohio State Medical Association will be represented by a delegation consisting of Drs. Eichberg, Cincinnati, Sollmann, Cleveland, and Winders, Columbus. We have been requested by them to publish the following notice:

The delegation of the Ohio State Medical Association to the Pharmacopeial convention will be glad to receive suggestions from the members of the Association, as to the matters which should be brought before the convention. Communications should be addressed to the chairman, Dr. Torald Sollmann, Medical College of Western Reserve, Cleveland.

For some years past the cry has been "Back to the Pharmacopeia," hence unusual interest should be taken in this important work this year.

Suggestions made in advance to our committee will aid it materially in determining professional opinions on mooted subjects, and it is to be hoped that members will avail themselves freely of this opportunity.

THE KENTUCKY LIFE INSURANCE FRAUDS.

Last month the daily papers contained dispatches from Louisville, Ky., detailing an alleged conspiracy on a grand scale to defraud life insurance companies by insuring old and decrepit individuals, healthy dummies assuming their names and taking the medical examinations. In some instances it is alleged that some "prominent" physicians connived at and assisted the practice, and have become entangled in the meshes of the law.

Further developments are awaited with interest; possibly the whole affair is greatly exaggerated and may amount to little. The term *prominent* as applied is doubtless in the usual newspaper sense, but at least, the reports serve to show how physicians as examiners could be made innocent parties to such practices, and be placed in most un-

pleasant positions, with the burden of proof resting upon them to show their innocence.

In the majority of cases the agent presents the applicant for examination; the latter may or may not be known to the examiner, who usually relies entirely upon the agent's honesty. It speaks well for the trustworthiness of agents as a class that so few attempts as reported above have been made to deceive the examiners; we might say that it speaks equally well for the honesty of physicians, but *noblesse oblige*, that virtue may be taken for granted, we trust.

For our protection, as a matter of form, if you will, in the majority of cases, it would be well to have some systematic method of identification of the applicant, especially if the latter is an entire stranger and the agent but little better. While it is always commendable to try to accomodate an agent and help him "get his business through," the examiner should never forget that he is not in the employ of the agent nor of the applicant, but rather of the company, and the latter looks to him to guard its interests. It is certainly a part of the examiner's duties to be sure that the applicant for examination is the individual named in the application even if it takes a little extra time or trouble to establish the fact.

THE APPOINTMENT OF DR. GEO. H. SIMMONS AS A MEMBER OF THE U. S. P. BOARD OF TRUSTEES.

The appointment of Dr. Simmons as a trustee of the U. S. Pharmacopeia is a recognition of his services in behalf of pure drugs and honest pharmacy, and as such should receive the hearty endorsement of the medical profession.

The following extract from the Midland Druggist shows where the honest druggists stand, and is an unbiased opinion of Dr. Simmons and his services to the medical profession:

"It is in connection with his (Dr. Simmons) position as General Secretary of

the American Medical Association and editor of the Journal that his greatest and most important work has been accomplished. Through his constructive efforts the association has evolved from a loosely coherent body into a closely knit and powerful organization the decision of which upon ethical and professional questions is accepted as the last word by the great majority of medical practitioners of the United States, and is received with corresponding respect abroad, while the Journal has developed from a comparatively unimportant publication of limited usefulness into the most widely circulated and most influential medical publication in the world.

It was also due to his constructive genius that the now celebrated Council on Pharmacy and Chemistry was organized, the efforts of which have been mainly devoted to the investigation and exposure of fraudulent proprietary medicines, whether advertised to the medical profession or direct to the laity. His work in this connection has been fearless and uncompromising. Many of the most blatant frauds of the proprietary class have been entirely driven from the market, the sale of others has been greatly reduced by their exposure, while still others have largely modified their claims to therapeutic efficiency.

So effective have been the efforts of the Council in this respect that the bare announcement that it is on the trail of a fraudulently described or advertised preparation is sufficient to send makers and dealers scuttling for cover.

Naturally Dr. Simmons is *persona non grata* with the proprietors of the medical and pharmaceutical frauds which he has exposed but he remains apparently undisturbed by this contraction of his visiting list.

There is certainly no better moral or other reason why the makers and distributors of proprietary medicine should practice fraud and deception without restraint than that the makers or dealers in any other fraudulent product should escape exposure and punishment.

For many years the laws of nearly all the states have been such that if one sought to practice medicine or pharmacy in a single neighborhood, he was permitted to do so only after passing the

gauntlet of a medical or pharmaceutical examining board, and was then required to practice under certain restrictions, but if he went into the business in a wholesale way he might practice either or both professions over the entire United States without let or hindrance, and without any other restraint upon his ability to deceive than those imposed by the physical limitations of type and printers' ink, and as a consequence the public has been the prey of charlatans of every class and degree.

For a long time those who grew rich by the practice of such wholesale fraud have been permitted to flourish without molestation, but these halcyon days are passing, and for this, so devoutly to be wished-for consummation no one is entitled to so much credit as Dr. Simmons.

In the early part of November of the present year Dr. Simmons was elected to the vacancy on the Board of Trustees of the United States Pharmacopeial Convention caused by the resignation of Mr. S. A. D. Sheppard, and brings to his new and important office natural abilities rare among medical men, an enormous capacity for work, and a judgment ripened by experience, all of which will be exercised by the progress and benefit of legitimate medicine and pharmacy. From every point of view his membership is a valuable addition to the board of trustees."

EDITORIAL NOTES

ANNOUNCEMENT EYE, EAR, NOSE AND THROAT SECTION.

The program of this section for the Toledo meeting is full.

This preliminary announcement is for the purpose of telling you some of the good things we are going to have and what an interesting and successful meeting it ought to be; considering the selection of the topics and the character and fitness of the essayists and discussants.

In the Eye program, the subject of the extraction of cataract in the capsule according to the method of Major Smith, along with the modifications of this operation by others will be thoroughly considered in a symposium of three papers, supplemented by a resume of the medical experience of our chairman while in India.

We will have a symposium of three papers on the Etiology, Pathology, Medical and Surgical Treatment of Chr. Simple Glaucoma.

A paper on Choroidal Atrophy in Myopia will be illustrated by original water colors, and Bilateral Dermoid of the Eyeball will be based on a case report.

There will also be a paper on "Concerning Tests Used in Latent Muscular Deviations."

Dr. de Schweinitz of Philadelphia will give an address in the evening on "Concerning Some Ocular Manifestations of Cardio-vascular and Renal Diseases."

Practically all of the Nose, Throat and Ear program this year will be devoted to ear subjects.

Nystagmus as relating to diseases of the inner ear and cerebellum will be considered in one paper and the influence of diseases of the labyrinthine on mastoid operation work will form the subject matter on another paper.

Cerebellar abscess of otitis origin based on a case report will make the third paper along this line of inner ear work.

There will also be papers on Ankylosis of Stapes, Non-operative Treatment of Otitis Med. Pur., and on the Use and Abuse of the Eustachian Catheter.

There will be an interesting list of case reports, exhibits and specimens.

Dr. Chevalier Jackson of Pittsburg will give a clinical lecture, demonstrating his tubes, and, if possible, will do some operative work with his tubes or a major laryngeal operation.

Some operative eye work will be provided for Dr. de Schweinitz and Smith. Cataract operations will be done by Green, Vail, Clark and Sattler.

This ought to be interesting enough to appeal to every oculist and aurist in the state and every man in this line of work is cordially invited to attend the meeting of our rapidly-growing section at Toledo, May 11 and 12.

WADE THRASHER, Secretary.

The Society of Medical History of Chicago has been recently organized, with Dr. Isaac N. Danforth as President, Dr. N. S. Davis as Vice-President, and Dr. George H. Weaver as Secretary. Its Council consists of Dr. Ludvig Hektoen, Dr. George H. Weaver, Dr. John Edwin Rhodes, Dr. N. S. Davis, Dr. Henry T. Byford, and Dr. George Henry Cleveland.

Dr. Howard A. Kelly, of Baltimore, will deliver the address at the first meeting, which will occur on the evening of February 19, 1910.

The Society has been formed for the purpose of systematically collecting and permanently preserving in an accessible manner any matters which are or will become of interest in connection with the medical history of institutions, organizations

and individuals, especially of Chicago and the surrounding states.

Some of the materials included in such a collection are:

Medical books printed in the West.

Reprints of medical articles written in the West.

Biographies and histories of medical organizations and institutions in the form of books, pamphlets and manuscripts.

Local medical journals published prior to 1880, and especially prior to the Chicago fire.

Catalogues, announcements, diplomas, graduation programs, etc., of the various medical schools.

Official reports, etc., of other medical institutions, including hospitals.

Official reports and publications of medical societies, including programs of meetings.

Official reports and publications of boards of health.

Various issues of medical directories.

Prescriptions of old date.

Photographs, pictures, etc., of buildings and individuals.

Manuscripts and autograph letters.

Instruments, etc., of historic interest.

Objects of special interest because of their association with certain individuals or events.

Anything which has a medico-historical value from any source.

By means of meetings held at such intervals as the available material warrants, the Society will endeavor to stimulate the writing of historical papers founded upon research from original sources. This is considered an important function of the organization. The Society does not intend to duplicate the work being done by medical libraries, but to co-operate with them in their special field. It desires to aid the present generation in gaining inspiration from the study of what its predecessors accomplished, often under adverse conditions, and to preserve for future generations such information as will be useful to them in their efforts for advancement and in understanding and properly estimating the work of their medical ancestors.

It is expected that arrangements will be made with the Crerar Library of Chicago for the care, after the completion of their building, of such materials as the Society may acquire. In the interval things of special value, such as manuscripts, etc., will be deposited in a fireproof place.

The Society asks the active support and help of the profession in its efforts to secure the desired materials. It makes especial appeal to those outside of Chicago for anything antedating the Chicago fire. It will gladly co-operate with other organizations operating in similar lines. Every-

thing collected by the Society will, as soon as possible, be so arranged as to be accessible to any person doing research work in medical history. Gifts to the Society will be duly credited to the donors.

All communications should be sent to Dr. George H. Weaver, Secretary, 1743 West Harrison Street, Chicago.

CLINICAL NOTE

A CASE OF TYPHUS FEVER IN OHIO?

The following case, believed to be typhus fever, occurred last month in the Columbus State Hospital and resulted most unfortunately in the untimely death of the patient, Dr. J. F. Conneffe, thus adding one more to the list of victims of this dread disease which already has the unsavory distinction, it is said, of having slain more doctors and nurses than any other of the epidemic contagious diseases.

Dr. Conneffe, it is believed, contracted the disease in Mexico, where he had gone with other investigators to study this and other diseases. He left Columbus for the South the middle of December and saw several cases of undoubted typhus of a particularly virulent type, as he himself related, "of eight cases admitted to the hospital, six died," a mortality of 75%.

He returned to Columbus January 6; on the way he stopped over in New Orleans, and while there complained of not feeling well, but attributed it to the discomforts of the journey. He still complained of general malaise on his arrival in Columbus, but in a day or two declared that he was quite well, and continued so until January 13, when he again complained of malaise and headache. It is not known whether he had a chill or not, but he complained of not feeling well, dragged himself about his duties, had some fever, headache and loss of appetite.

He remained in bed on the 14th with well-marked fever and active gastric symptoms, as one of his attendants described it, "he vomited all day and night." He complained of no pain, only intense nausea, headache and the various discomforts of fever.

On the 15th of January, it was evident that he was the victim of some severe acute disorder, and in view of his possible exposure to various contagious diseases, it was decided to isolate him. On this date he had high fever, 104° F., his face was dusky, his eyes injected, tongue coated, pulse full and bounding, bowels constipated.

On his abdomen were a few roseolar spots, closely resembling the eruption of typhoid fever. Within the next 48 hours the eruption spread up

to his chest, down his thigh and on his back. The spots were a dark red, not elevated, and on his thighs, forming irregular blotches. His fever on these two days, the 16th and 17th of January, remained high, 104° F., in spite of cold baths every two hours; he was slightly delirious, did not wish to stay in bed, tongue coated heavily and sordes prevented only by very frequent cleansing of the mouth. The urine was very scanty, high colored and smoky.

The blood examination of the 18th showed: Red blood cells, 6,500,000; leucocytes, 23,000, with no marked disturbance of the ratio of the various cells. The urine contained a large amount of albumin, with granular and blood casts, epithelial cells and blood cells. Temperature 101° in the morning, 103½° in the evening.

In the afternoon he developed some huskiness of voice and cough and bled freely from the nose; the blood discharge was thin, watery and difficult to stop.

The writer saw him Wednesday the 19th when he presented the following: His eyes were injected, the face flushed and swollen, but free from eruption. The skin of the face appeared infiltrated and felt hard and stiff, and decidedly roughened, almost like a fine sand paper.

The tongue was heavily coated, brown and cracked; the lips were cracked and blood stained. He talked with some difficulty, owing to some laryngeal infiltration or edema. The attending physician stated that his local throat condition was much better than earlier on the same day. There was a peculiar musty odor, which was very noticeable on approaching the bed.

The Eruption—On the abdomen and chest was a scattered eruption, fairly abundant, irregular in distribution and polymorphous; there were small purplish spots; petechiæ, slight elevations and a few umbilicated vesicles, purplish in color, evidently containing a hemorrhagic exudate. On the back and thighs the eruption was extremely abundant, the skin was fairly peppered with the purple spots, petechiæ, etc. There were only small areas of normal skin. Toward the extremities the eruption became scantier, until the hands and feet were but slightly broken out, with, however, a few spots and on the palms of the hands and soles of the feet. There were no pustules to be seen anywhere on the body; this was the eighth day of the disease.

The temperature on this day was 101°, P. M. 103°; the mental condition appeared to be quite clear though sluggish. The pulse was of good character and in proportion to the temperature. The bowels, which had been obstinately constipated, had been moved by cathartics and kept

freely open. The nausea noted the first day or two of the disease had entirely subsided. The patient's condition seemed promising, except for the nephritis and the laryngeal condition.

The subsequent history supplied me is short. Early the next morning the laryngeal obstruction became markedly increased; the lungs seemed relatively clear and inspiration appeared to be easy while expiration was increasingly difficult, until it apparently became impossible to expel the inspired air, and he died with his chest widely distended. There was no autopsy.

The question arose as to the diagnosis inasmuch as typhus fever is an unknown disease in this state. In conjunction with Drs. C. F. Gilliam, the Superintendent of the State Hospital, and W. L. Dick, the City Medical Inspector, I believe the diagnosis of typhus fever is justified by the history of exposure, the period of incubation, the hemorrhagic character and the distribution of the eruption, the nephritis and laryngeal symptoms.

Hemorrhagic measles and smallpox were suggested as possibilities.

In regard to the former, the patient had had true measles as a child, and while occasionally one may have, perhaps, a second attack, it, in such cases is always mild; in this case also the eruption, to anyone at all familiar with measles, was certainly not of the type seen in that disease. It was certainly not measles.

Hemorrhagic smallpox is perhaps more difficult to exclude. There are two forms described; early hemorrhagic spots appearing on the skin—the patient dying before the true eruption manifests itself. In the second form the ordinary eruption develops, and suddenly hemorrhage occurs into the vesicles.

In this case by the eighth day there were only a few small umbilicated vesicles, but innumerable spots and papules—and *no pustules* at all. The eruption was absent from the face, and scanty on the hands and feet. The patient had no history of exposure to smallpox, and had a good vaccination scar of nine years' standing. Dr. Dick, who has had a wide experience with smallpox, pronounced the case not to be one of smallpox in his opinion.

It was deemed wise as well as justifiable in this case to give the community the benefit of any doubt and to make the diagnosis of typhus fever. Up to the present writing no new cases have developed.

J. H. J. U.

In catarrhal icterus the pulse is usually slow; in jaundice from cholelithiasis this is usually not the case.—Surgical Suggestions.

STATE BOARD NEWS

EXAMINATION IN PHYSIOLOGY.

December 7, 8 and 9, 1909.

1. Define metabolism.
2. What is the difference in food requirements between adolescence and adult life?
3. Where and by what secretions is meat digested?
4. At what point does intestinal and pancreatic digestion cease, and why?
5. Of what is normal feces composed, and what is its source?
6. What is lymph, and what is its relation to nutrition?
7. Describe the physiology of the larynx.
8. What is asphyxia, and how does it produce death?
9. Describe the motor areas of the brain for the trunk and lower extremities.
10. What is the sympathetic nervous system and its function?

H. H. B.

OBSTETRICS.

1. Briefly state what can be done to prevent toxemia of pregnancy.
2. Make a diagnosis of accidental hemorrhage. Give some of its causes and suggestions for its control.
3. Explain the causes of the fetal mortality incident to breech presentation.
4. What conditions indicate the use of the forceps? What have you to say concerning its frequent use?
5. Make a differential diagnosis between ascites and ovarian cysts.
6. What is the history of retro-displacements of the uterus where pregnancy exists?
7. Discuss briefly the use of mechanical supports in uterine displacements.
8. Give the signs and symptoms of pelvic abscess.
9. Give the clinical history of fungus endometritis. What treatment do you advise?
10. Describe the development of the heart.

E. J. W.

ANATOMY.

1. Describe the scapula.
2. Name and locate the ductless glands.
3. Briefly describe the reproductive system of the male.
4. Give the surgical anatomy of the gall bladder.
5. How many bones in an upper extremity? Name them.
6. What bone in the human skeleton first shows signs of ossification?
7. What structures enter into the formation of a joint?
8. Name the muscles that move the eyeball.
9. Give origin, course and distribution of intercostal nerves.
10. With how many kinds of nerves is the tongue supplied? Name them.

S. M. S.

DERMATOLOGY, SYPHILOLOGY AND DISEASES OF THE EYE, EAR, NOSE AND THROAT.

1. Define eczema and describe eczema of the hairy scalp.

2. Mention the differential characteristics between psoriasis and eczema.
3. How would you treat scabies?
4. Define initial lesion of syphilis, and mention its principal varieties.
5. Describe papular syphilis.
6. Mention the fundamental alterations of the eyeball causing myopia, and how is it corrected by lenses?
7. Describe iritis, its varieties and treatment.
8. Mention the causes which produce bleeding from the nasal cavities (epistaxis) and how it can be checked.
9. Describe acute suppurative inflammation of the middle ear and the dangers therefrom.
10. Describe tuberculosis of the larynx.

A. R.

PRACTICE OF MEDICINE.

1. Give treatment, hygienic and medicinal, of catarrhal bronchitis, non-tubercular.
2. Give treatment, hygienic, dietetic and medicinal, of Bright's disease.
3. How does remittent fever differ from typhoid fever?
4. Give treatment for chronic cystitis.
5. Give the etiology, symptoms and treatment of diabetes mellitus.
6. What is locomotor ataxia? Give its causes and treatment.
7. How would you treat a case of erysipelas?
8. State the probable location of a gall stone from the attendant symptoms.
9. Name some of the sequelae of adenoids.
10. How would you treat prolapse of the rectum?

H. H. B., S. M. S., J. M. S., J. A. D.

MATERIA MEDICA AND THERAPEUTICS (ELECTIC).

1. Give properties, uses and doses of apocynum.
2. Give specific indications for bryonia.
3. In what class of diseases, and in what form and dose, would you prescribe iris?
4. What are the indications for pulsatilla?
5. What is the botanical name for black cohosh and in what conditions is it useful?
6. What indications would cause you to prescribe chionanthus?
7. When would you prescribe digitalis?
8. What is the botanical name of lily of the valley? What are its uses?
9. What are the uses of saw palmetto?
10. When would you use the X-ray therapeutically, and how treat the burn if such a case came to you?

S. M. S.

MATERIA MEDICA AND THERAPEUTICS (HOMEOPATHIC).

1. Name two nosodes used in the treatment of tuberculosis. What are the results? Is this homeopathic?
2. In treating a case homeopathically, how do you determine the size of the dose?
3. Differentiate aconite and gelsemium.
4. Give the chief homeopathic indications for china.
5. Compare the cough symptoms of phos. and tart. emet., bryonia and kali bich.
6. Name two remedies most likely to be called

for in the onset of a well-defined case of pneumonia.

7. Differentiate aloes and merc. cor. in the treatment of dysentery.

8. How and from what is the tr. of arnica prepared? Tr. of phosphorus? Tr. of apis?

9. What is the strength of the tr. of lachesis and from what prepared?

10. When would you use the X-ray therapeutically, and how treat the burn if such a case came to you?

T. A. M.

MATERIA MEDICA AND THERAPEUTICS (REGULAR).

1. Name the alkaloids of veratrum viride; give their physiological action and therapeutic indications.

2. From what source is salicylic acid obtained? Describe its physical properties. State how it should be administered and some indications for its use.

3. Give the most important uses in medicine for sulphur.

4. Given an acutely dilated stomach, with retention of food, how should it be treated?

5. Give a physiological reason for your conclusion concerning the value of external applications to the chest in diseases of the lungs.

6. Write a prescription for a man about thirty-five years old, of sedentary life, who is a large eater of what he calls "the substantial foods," who suffers from headache a good deal.

7. How is quinine curative in malarial diseases? How would you treat a case of poisoning from digitalis?

9. How do diuretics produce their effect?

10. When would you use the X-ray therapeutically, and how treat the burn if such a case came to you?

E. J. W.

PATHOOGY, BACTERIOLOGY AND HYGIENE.

1. Define fatty infiltration.

2. Name four different kinds of pigmentation.

3. What type of carcinoma is most common in the stomach?

4. What is a cyst, and what are the different forms?

5. Describe the microscopical appearance of glaucoma.

6. Name four pathogenic cocci and what disease they cause.

7. Name the specific cause of syphilis; malaria; diphtheria; pink eye; scrofula.

8. What are the sanitary requirements in house plumbing?

9. Name three methods of purifying water.

10. What is sewer gas? What evils may arise from it?

J. A. D.

DIAGNOSIS.

1. What pathological significance is given to the plantar reflex (Babinski phenomenon)?

2. A general distention of the abdomen, what pathological conditions may it suggest?

3. When blood is found in the urine, how can its origin be determined?

4. Define rales, mention their principal types and give their pathological significance.

5. What indications are derived from an increased dullness of the cardiac area toward the left and downward?

A. R.

SURGERY.

1. What is the maximum dose of cocaine when hypodermically administered?

2. What measures would you employ should the patient show untoward symptoms during chloroform anesthesia?

3. Make a diagnosis of anterior dislocation of the hip joint. How reduce it?

4. Diagnose appendicitis.

5. How would you treat an acute strangulated hernia by other methods than by operation?

6. Should a tumor of the breast ever be treated palliatively?

7. Diagnose empyema. Give two causes.

8. Diagnose pyosalpinx. Name the two most prevalent causes. Briefly how treated.

9. Give the relations of the ureters to the uterus and state what you would do if one of the ureters should be severed during operation.

10. Describe the mode of administration of serum therapy in cerebro-spinal meningitis.

T. A. M.

CHEMISTRY.

1. Name the halogens and give the properties and uses of the one you consider the most important.

2. Explain the action of acids and alkalies on the fluids of the tissues.

3. What is the effect of the calcium salts in the system and for what conditions are they especially useful?

4. What are the tests for stomach hyperacidity?

5. What kind of water would you consider pure for drinking purposes? What impurities could you detect by chemical tests?

6. How does alcohol act as a poison?

7. What are alkaloids? Name five.

8. What is an antiseptic? Name five and briefly explain their action.

9. Give a physiological and a chemical antidote for morphine. Explain the action of each.

10. Name four mineral poisons and give their antidotes.

J. M. S.

CORRESPONDENCE

Editor Ohio State Medical Journal:

Dear Sir—At the recent meeting of the Northwestern Ohio Medical Association, the following resolution was passed and requested published in the medical journals of the state.

WHEREAS, The President of the United States, in his annual message to Congress, has recommended the establishment of a national board of health; and,

WHEREAS, The above recommendation has been endorsed by the medical profession of the United States and is to be most highly commended in conserving the economic and social resources of our citizens. Therefore, be it

Resolved, That the Northwestern Ohio Medical Association, at its sixty-fifth session, endorses this recommendation and urges its early adoption.

Very respectfully yours,

E. A. MURBACH, *Secretary.*

MEDICAL ECONOMICS

By J. W. CLEMMER, M. D.

W. C. Abbott, of Chicago, in an article on preventive medicine recently mailed to physicians, pronounces the subject a fetish and ridicules the efforts of physicians who advocate its practice. The following is characteristic of this singular attack upon an essential feature of medical organization and professional conduct: "Now, preventive medicine is a very nice thing to talk of and a beautiful idea to be dangled before the eyes of the public; but as applied to the duties of the practitioner of medicine at the present day, it is rot. From what source does the physician derive his income—from the disease he prevents, or from those he treats? In the second place, we have neither the authority to compel observation of the rules by which disease may be prevented; nor have we the influence over our patients to persuade them to adopt these rules; nor yet have we that knowledge of the causation of disease which would permit us to establish a perfect system of such rules as would completely prevent disease."

The public health defense, compassed by physicians in reporting communicable diseases, in maintaining quarantine, in preventing the spread of infection and in teaching prevention, is condemned, by one who assumes the role of teacher. The activities of the organized profession in safeguarding the sanitary and prophylactic interests of the patient, as a professional duty, removes the practice of medicine from the dominion of commercialism.

The neglect of these interests in order to promote selfish ends, as Dr. Abbott advises, reduces medicine to the level of a trade. No argument is needed to expose the false claims of Dr. Abbott. Opposition to the organized profession is well understood. The violation of professional rectitude by the trade spirit in the livery of ethics is also easy of comprehension.

The State Dairy and Food Commissioner is actively engaged in prosecuting dealers who water oysters.

It is often said that there are too many physicians. If all of the sick received proper attention there would not be enough.

Ophthalmia neonatorum produces one-third of all blindness. A solution of nitrate of silver (2½%) dropped into the eyes of every new-born infant is preventive.

There is nothing gained, but much lost by unprofessional conduct.

Harmony among physicians in treating cases increases their competency and affords the sick the best means of recovery.

Secretary Matson of the State Medical Board is maintaining a splendid record in prosecuting illegal practitioners. The last offender coming under his observation is "Phenomenal Krauss," who was arrested in Cincinnati on a charge of illegal practice. With him were associated two physicians, Morton R. Lambricht and B. P. Ivey, who were cited to appear before the board to show cause why their certificates should not be revoked. A victim of the "Electro-Medical Institute" has entered suit against the "Phenomenal" for \$10,000 damages. Matson prosecuted Krauss at Lorain sometime since and secured his plea of guilty to practicing medicine without a license and a fine of \$100 and costs.

DRUGLESS HEALING.

The drugless healers are prepared to battle before the Legislature for state authority to practice medicine. The enthusiasm and persistence of the "healers" with a demonstration of "cured cases," as pitted against the dolittle policy of physicians, heretofore, have established a forceful ingratiating with members of the law-making body. It seems an ungracious effort to oppose these fanatic people in their effort to create another State Medical Board with farcial standards of qualification for practice. The present medical practice act exists in the interests of the public. If this is not true, it should be repealed. It was secured by efforts of the profession to drive out the many charlatans then overrunning the state. It should be maintained to prevent quackery.

It is a well-known fact that the people submit to unsanitary and dangerous conditions of their own creation.

Water and food supplies, construction of buildings, plumbing, elevators, etc., are sources of danger to life and health, unless regulated by sanitary, building and other codes. In a like manner the medical practice act protects people from their own folly or carelessness against the imposition and danger of quackery. This law is to be broken down by the drugless healers in an effort to create another State Medical Board.

The state should not be permitted to stultify itself in establishing different standards of medical practice. The term "drugless healing," assumed by non-medical men, to carry the impression that the medical profession is confined to drugs for its therapeutic resources should not deceive any one. If, however, the state finds that drugless or non-medical healers should be recognized and qualified, according to their own non-medical standards, allowing all manner of uneducated men to practice medicine, consistency demands that this enactment carry with it the repeal of the medical practice act.

MEDICAL ORGANIZATION AND THE PUBLIC.

Medical organization is not a trade to be regulated by commercial methods. It is not based on market quotations, but upon the efficiency and value of its service to the people. Medical organization consists of two factors. One relates to the accumulation and diffusion of medical knowledge. For this purpose there exists medical colleges, libraries, current literature, societies, laboratory and post-graduate work. The other factor may be classed under medical economics which includes the enactment and enforcement of medical laws, the public health defense, medical service to public office and public institutions, the rights and duties of physicians or medical ethics, the maintenance of state medicine in accord with professional standards, the protection of the public against medical practice fraud and ignorance and kindred subjects.

The relation of the profession to the public is based upon the interest of the patient, as being of primary or supreme importance and upon a fair and honest statement of medical facts. Any one violating this ethical rule by making false statements, practicing secret methods or ignoring the interests of the patient in order to promote his own, is an enemy to medical organization. Hence it is that there is an eternal warfare between the profession and the charlatan. Hence it is that any trade manufacturer or publisher it is that any trade, manufacturer or publisher public or misrepresents medical facts opposes the fundamental principles of medical organization.

The medical interests of the laity are identical with the vital principles of the organized profession. The vast storehouse of medical knowledge and skill is the result of individual effort and contribution through ages past. It is not the result of purchase and is not the subject of sale. Some valuable facts have come from laymen. The profession constitutes the highest tribunal

to test and finally fix the value of facts or agents proposed from whatever source.

Professional organization conditions not only free access but free contribution to this great storehouse of knowledge, and it also conditions that this privilege shall not warrant a misuse of this fund in practice or by establishing theories and dogmas upon fragments of truth to the neglect of all of the rest, as happens with the cults of the day. Never before were there so many enemies to medical organization as at present. The opposition grows because there is lack of defense. Medicine has been attacked in many ways to destroy the proper relations of the physician to the public. Scientific attainments, as factors of medical organization, stand abreast the progress of the age. The other factor has been neglected. Medical journals and societies are given almost wholly to a one-sided development of medical organization. They are devoted to scientific work to the neglect of medical economics.

The defense of medicine against the invasions of cult healing and of commercial and political piracy, long neglected, is today the most important question before the medical world. Medical economics are to the profession what the army and navy are to the industrial and social life of the country. The government devotes 40 per cent of its revenues to this defense. What per cent of the activities of the profession is devoted to the defense of its worth and integrity? What is the defense against the practice of medicine by so-called optometrists, healers and commercial house agencies? What is the defense against its enemies who hide in the rifle pits of the public press and in the livery of United States Senators who fight public health interests to curry favor with trade monopolies?

The excellent defense being made by the American Medical Association must be supplemented by every other medical organization and the individual physician in order to accomplish a completed work of the profession.

CRIMINAL ABORTION BILL.

Section 1—That Section 12412 of the Revised Statutes be supplemented by the enactment of Section 12412a to read as follows:

Section 12412a. On the trial of one indicated for a violation of Section 12412 of the Revised Statutes the woman whose miscarriage was procured may be called as a witness by the state! And if, being so called, she shall testify fully to the cause of such miscarriage, she shall not thereafter be prosecuted for her participation or complicity in such offense.

And on such trial the dying declaration of a woman who died in consequence of the miscarriage or attempt to produce a miscarriage under investigation, as to the cause and circumstances of such miscarriage or attempt, shall be admissible.

LOCAL BOARDS OF HEALTH AND DIRECTORS OF PUBLIC SAFETY.

Under revision of the Codifying Commission the provision that the city council may confer the duties of the board of health on the director of public service has been omitted. This point was developed by our legal adviser, the Hon. Samuel H. West, who advises that the proposed amendment is not now necessary.

NOTICE.

It is requested that members send to the Chairman of the State Legislative Committee, to be used in the public hearings before committees of the Legislature, any advertising matter referring to optometry, medical advertising, advertising of opticians, cures for sexual and venereal diseases. These will be of benefit as *exhibits*.

BOOK REVIEWS

A TEXT-BOOK OF OBSTETRICS: Including related gynecological operations. By Barton Cooke Hirst, M. D., professor of obstetrics in the University of Pennsylvania. Sixth revised edition. Octavo of 992 pages, with 847 illustrations, 43 of them in colors. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$5.00 net; half morocco, \$6.50 net. W. B. Saunders Company, Philadelphia.

It seems hardly necessary to attempt to criticize a book of six editions.

The preceding edition of this work was reviewed in this column as one of the best books on this subject at present available for students and general practitioners.

The appearance of this, the sixth edition, continues this good impression. The author has added the later views on the various intoxications, and widened the scope of his subject in regard to operative measures necessitated by childbirth, giving technic, etc.

The book is as well mounted as formerly and profusely illustrated.

TUMORS OF THE KIDNEY. By Edgar Garceau, M. D. New York and London: D. Appleton & Company, 1909.

Garceau discusses in a most satisfactory manner the subjects of renal, urethral, peri-renal and adrenal tumors, and in addition, actinomycosis and echinococcus of the kidney. The author has had access to the pathological material from the

surgical laboratory of the Massachusetts General Hospital, and has used this, together with statistics from other authors in discussing the subjects considered.

Solid tumors of the renal parenchyma are given a new classification, and the subject of hydronephroma is given considerable space. The author classifies 176 cases from the literature.

Sarcoma, carcinoma—embryonic tumors, and new growths of the ureter and renal pelvis are discussed. The last chapter deals with the methods of determining renal insufficiency. For the matter of separating the urine, Garceau is in favor of Luy's instrument, but discusses the catheterizing cystoscopes and the technique of their use. The phloridzin test, cryoscopy, methylene blue test, and Albarren's polyuria test are mentioned as methods for determining the functional action of the kidney.

The volume contains over 400 pages and is the last of a series of monographs by the Appleton Company.

THE CHEMISTRY OF MEDICINE—A text and reference book for the use of students, physicians and pharmacists, embodying the principles of chemical philosophy and their application to those chemicals that are used in medicine and in pharmacy, including all that are official in the Pharmacopeia of the United States, with fifty original cuts, by J. U. Lloyd, formerly Professor of Chemistry in the Eclectic Medical Institute; Professor of Pharmacy in the Cincinnati College of Pharmacy; author of Elixirs. Eighth edition. Published by Robert Clarke & Co., Cincinnati.

The first edition was entirely disposed of within a month. Many complimentary and favorable notices from teachers and journals of medicine and pharmacy led him to later editions. That the book is valuable all who know Prof. Lloyd will feel certain, and no one but Prof. J. U. Lloyd could make dry chemistry as interesting as Oliver Wendell Holmes did anatomy.

SYSTEMIC (INCLUDING SPECIAL) PATHOLOGY. By George Adami, M. D., and Albert G. Nicholls, M. A., M. D., F. R. S., Assistant Professor of Pathology in McGill University. In one octavo volume of 1082 pages, with 310 engravings and 15 colored plates. Cloth, \$6.00, net. Lea & Febiger, Philadelphia and New York, 1909.

This, the second volume of this work, must be considered as the complement of its predecessors, and viewed from that point. Taking into consideration the magnificent ground work of general pathologic processes treated of in Volume 1, this volume will be found to round out the subject most satisfactorily, and the two together form a monumental work of unusual character; quite the

most comprehensive and thorough treatise by American authors with which we are familiar.

DIAGNOSTICS OF INTERNAL MEDICINE. By G. R. Butler, M. D. Publisher, D. Appleton & Co.

This is the third edition of an excellent work for quick reference. The criticism of discursiveness and superficiality has been applied, and perhaps it might be better to curtail the number of subjects considered, and treat them individually more at length, and more thoroughly, but nevertheless for the student and the busy practitioner there is a great deal of value in the work. The classifying of symptoms, and the differential diagnosis are very good. A number of new tests have been added, and in general the new edition is strictly up to date.

RECTAL DISEASES—Their Diagnosis and Treatment by Ambulant Methods. By Jacob Dissinger Albright, M. D. A practical treatise on the conservative treatment of all non-malignant diseases of the Rectum and Anus, describing in a comprehensive manner all modern office methods. 455 pages, 32 full page plates, 4 of which are in colors, 4 radiographs and 39 text illustrations. Extra cloth, \$4.00; full flexible leather, \$5.00, prepaid. Published by Practitioner Pub. Co., 3228 N. Broad Blvd., Philadelphia.

This is a work for the general practitioner. The author believes that much of the rectal work referred to specialists can be done by the average physician; in his opinion the subject is not properly taught at present, and many of the non-ma-

lignant conditions are readily amenable to office treatment if the general practitioner would but realize it. He urges more attention be given the subject as it is a fruitful field, the proper exploitation of which would be of advantage to the patient as well as the profession.

THE OPHTHALMIC YEAR BOOK—Vol. VI. By Edward Jackson, A. M., M. D., Professor of Ophthalmology in the University of Colorado. George E. de Schweinitz, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania. Theodore B. Schneidemann, A. M., M. D., Professor of Ophthalmology in the Philadelphia Polyclinic. The Herrick Book Co., Denver, Colorado.

This is of especial interest to ophthalmologists and will be appreciated by them as a digest of the literature of the subject appearing in the preceding year. An index of the publications will be of considerable value for reference.

Beginning with the January (1910) issue, the old established Medical Review of Reviews will be edited by Dr. William J. Robinson, editor and founder of the Critic and Guide, Therapeutic Medicine, and The American Journal of Urology.

The editorial offices of the Medical Review of Reviews have been removed to 12 Mt. Morris Park West, New York City. The scope of the journal will be enlarged and every department will be strengthened. The subscription price remains the same—namely, \$2 per annum.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.

JONNESCO'S METHOD OF SPINAL ANESTHESIA.

Spinal anesthesia is not a new procedure but as usual when some modification of an old method is advanced some newspaper with characteristic haste and inaccuracies rushes into print with fantastic tales of the "new discovery." Such has been the case with Jonnesco's procedure. Of the method as practiced by Jonnesco the Medical Record has this to say:

"The two essential points of novelty are: (1) That the puncture is made either in the dorsolumbar region, for operations on the abdomen or lower extremities, or between the first and second dorsal vertebrae, for operations on the upper portion of the body or the head; and (2) that strychnine is added to the anesthetic, this addition preventing, it is claimed, the occurrence of bulbar symptoms when the higher injection is made.

Among the advantages claimed for general spinal anesthesia are that it can be given by the surgeon himself, thus doing away with the need of a special anesthetist and so reducing the number of assistants; that it can be used in any case with absolute safety, there being no contraindication to its employment; that it greatly simplifies operation on the face or throat by doing away with the troublesome masks; that it usually is attended by immobility of the limbs by reason of the paresis resulting from the anesthesia of the spine; and finally, that there is immobility of the abdominal viscera, including the intestines, the advantage of which in cases of laparotomy can hardly be overestimated.

Concerning the safety of the method Jonnesco speaks with the most absolute confidence, with a disquieting confidence indeed, for it is not founded on a sufficiently long or wide experience. He has

used it in 412 cases, 295 dorsolumbar injections, and 117 upper dorsal injections, and his colleagues, Jiano and Nasta, have used it in 211 cases, 172 dorsolumbar and 39 dorsosuperior injections—a total of 623 operations in the course of a year, without a death and without any serious complications. In addition, Jonnesco had 603 cases of lumbar anesthesia before he began to use strychnine, all without any untoward complication. That is indeed a strong showing and explains, even if it does not entirely justify, the author's confidence."

All of which goes to show that this is only one of the methods of spinal anesthesia and that as yet it has not established its superiority over other methods which does not deny that such superiority may exist.

THE INFLUENCE OF HYDROGEN PEROXIDE ON HYDROCHLORIC ACID SECRETION.

E. H. Goodman finds this remedy an excellent one in hyperchlorhydria. From one to two drams of a 3 per cent solution in a glass of water. Weaker solutions seem to be inefficient. The remedy is best taken after meals. The above dose may be doubled if necessary. The claim of the author as to the reduction of acid excess is substantiated by the results of chemical tests of stomach contents before and after taking the remedy.—*New York Med. Jour.*, Nov. 6, 1909, via *Med. Record*.

THE TREATMENT OF AMEBIC DYSENTERY.

With the increased intercourse between the Isthmus of Panama and the states there will not infrequently be brought back so-called tropical diseases. Such was the case after the Spanish-American war when many returning soldiers brought home chronic amebic intestinal infections to puzzle their family physicians. Many of these cases were unrecognized until they drifted into the hospitals of the larger cities and even then were often treated for some time along general lines before it occurred to the attendants to examine the bowel for ulcers and the stools for the ameba. Deeks and Shaw report some interesting data (*Med. Rec.*, Nov. 13, '09, p. 306), collected at Ancon. Their summary is as follows:

"No race or nationality is immune. There is no endemic local center. Complications are numerous, but the most common is abscess of the liver. The longer treatment is delayed the more grave the prognosis. The rest-supportive treatment, consisting of a rest in bed, a milk diet, the use of mild irrigations, and bismuth sub-nitrate in

heroic doses has given the most satisfactory results. Surgical interference is indicated if improvement does not rapidly follow the above treatment."

MERCURY AND ATOXYL COMBINED FOR INJECTION.

Mickley (*Deutsche Medizinische Wochenschrift*, No. 41, Oct. 14, 1909) reports on "thirty-one cases in which he has used a mercury and atoxyl combination for the treatment of syphilis. The combination is made up so that it contains 24.7 per cent arsenic and 32.37 per cent mercury. In giving it, it is mixed with nine parts of olive oil and injected intramuscularly in .5 g. (i. e. 7½ gr.) doses. Three days later another .5 dose of the mixture is given, and four days later 1 g. Then at weekly intervals doses are given for four weeks, until the patients receive in all .5 g. of the Hg and As combination. Figuring out this amount, it makes the total Hg only 0.16 g. and the arsenic 0.12g. In women smaller doses are used. The symptoms rapidly disappear in the course of a few days in both secondary and tertiary syphilis. The explanation of the action of this combination he does not make nor has he followed the cases long enough to find out if symptoms recur without further treatment. There is some pain at site of injection, but no lasting injuries to kidneys or eyes have been noted by him."—*Med. Record*.

THE LARGE BOWEL NOT ESSENTIAL TO LIFE.

Brown (*Amer. Jour. Obs. and Dis. Women and Child.*, Nov., '09, p. 775) reports an interesting case. The patient following an operation for obstruction had had a fistula through which for three years all the fecal discharge had passed. None whatever passed the large bowel. On operation to close the fistula the ileum beyond the fistula was found to be entirely closed, and become a solid tube through which it was hardly possible to pass a grooved director. The large bowel though somewhat contracted still allowed of an anastomosis with the ileum. In twelve hours after the operation the patient was passing gas, and in twenty-four hours he had a profuse diarrhea, which was checked with considerable difficulty. He concludes from this that the "statement which has been made, namely, that the large bowel is absolutely useless, is correct. On many occasions he has put out of commission the entire large bowel, and it has not particularly interfered with the functions of the patient other than that of passing fecal matter through his anus."

TINCTURE OF IODINE FOR STERILIZING THE SKIN BEFORE SURGICAL OPERATIONS.

Grossich (Berliner Klinische Wochenschrift, No. 43, Oct. 25, '09, via Med. Rec.) claims that "the mechanical method with water, soap, brush, ether and alcohol results in the swelling of the upper layers of the epidermis, which are partly scrubbed off, exposing, but not destroying the bacteria in the deeper layers. His method consists in the application of the tincture of iodine to the dry, clean skin for from 5 to 10 minutes. The penetrating and antiseptic qualities are superior to those of any other antiseptic. His method is supported experimentally by bacteriologic investigations and clinically by his own results, primary healing in all of 700 traumatic injuries, unless there were signs of infection at time of operation; an unbroken series of 500 minor and major operations in which skin infection never occurred (this last series including 129 consecutive hernia operations)."

[This method is not new but is none-the-less a good one. Some surgeons apply the iodine to the skin and then follow with the usual soap-and-water, ether, and alcohol cleansing which removes the excess of iodine and seems very satisfactory.—Ed.]

THE BEST TIME FOR REMOVAL OF CHRONIC INFLAMMATORY MASSES IN THE PELVIS.

Crossen (Surg. Gyn. & Obs., Oct., '09, p. 405) discusses the subject from the clinical and statistical viewpoints. His reason for calling attention to the matter is that enough attention is not given in text books to the subject; that many operators seem unaware of the dangers of operating on inflammatory masses following puerperal sepsis and so sacrifice their patients; and in order to emphasize the necessity of careful records of all such pelvic operations in regard to duration of the trouble, the exact location, the bacteriologic findings and the results of the operation, that future errors may be eliminated. His general conclusions are of value to every physician. He finds that "gonococcic infections in the pelvis are generally tubo-ovarian. Streptococcic infections are generally parametric. In more than half of the cases of chronic suppuration in the pelvis the pus is sterile at the time of operation, showing that sterilization of the infected focus takes place automatically within a reasonable time in the majority of cases. This time is within about four months in gonococcic cases and indefinitely longer in streptococcic

cases. Abdominal removal of the mass while the bacteria are active and virulent results in fatal peritonitis or local infection in many cases. Removal when the bacteria are dead or greatly attenuated is practically never followed by infection, even though there is extensive escape of pus into the pelvis. Abdominal section for removal of a streptococcic mass is never safe, as even years after the infection it may be followed by fatal peritonitis."

CURING BEGINNING GONORRHEA BY SEALING ARGYROL IN THE URETHRA.

Ballenger (Therap. Gaz., Nov., '09, p. 767) finds the following method very efficient. The glans and foreskin are well washed with soap and water, dried and a ten per cent solution of cocaine on a pledget of cotton placed on the meatus to prevent the pain which would otherwise follow the application of the collodion. Twenty gts. 5 to 8 per cent sol. argyrol is then injected with a bulb-pointed syringe and the syringe removed. The lips of the meatus are then dried, held firmly together and sealed with collodion. The argyrol should be retained until the patient has to urinate. Only a small amount of liquid should be taken while the treatment is carried out. A small meatus may be held together by zinc oxide adhesive plaster. Two treatments should be given daily for two or three days, and one treatment for one or more days, according to conditions. If abortive methods fail the argyrol should be sealed in the urethra daily, occasional irrigations given and small doses of gonococcic vaccine used every other day.

CHRONIC INFECTIOUS ENDOCARDITIS.

Billings (Arch. Int. Med., Vol. 4, No. 5, Nov., '09, p. 409) gives a detailed study of fourteen cases. He shows that the term "chronic endocarditis" is justified since some of the patients undoubtedly had had the ailment for over ten years. Blood cultures are essential to a proper study of these cases. Many of them can be diagnosed during life only by the cultures. It is particularly interesting to note that the organism in eleven cases was pneumococcus, although there showed many of the morphological characteristics of streptococci. The remaining three cases were classed as streptococcus but very possibly were also pneumococcus. Vaccines did not give uniform results, nor did the use of serum in an attempt to furnish complement avail. The treatment remains that which has been usual in such cases; absolute rest in bed, good air, sunshine, as much

soft solid or liquid diet as may be given and the use of such remedies as conserve the patient's strength without mischievous interference. The use of vaccines is not recommended.

POST-OPERATIVE PSYCHOSES.

Kelly (Surg. Gynec. & Obs., No., '09, p. 521) says that post-operative psychoses occur most often in childhood and the aged, but are also seen in women in the prime of life between the ages of thirty-five and forty-five. He believes that anesthesia, shock, nature of operation or severity of it are not effective causative agents; but that infection, autointoxication and drug intoxication are important factors, while many psychoses are entirely independent of them. Transitory aberrations are very common. Anxiety and worry over the operation or the trouble leading to it, together with an unstable nervous system are the most potent causes. The prognosis is favorable but care should be taken to apprise the relatives of the nature of the trouble to avoid legal or forensic complications. The best prophylaxis is a good nurse who will aid in quieting and reassuring the patient.

TUBERCULIN OPHTHALMO-REACTION ABSENT IN THE NEW-BORN.

Duverger (Ann. de Gyn. et d'Obst., Aug., 1909) has made at the Hospital Baudelocque installations tuberculin into the eyes of 500 new-born infants. An aqueous solution of tuberculin furnished by the Pasteur Institute was used. Of the 524 reactions tried by the author none were positive or showed tuberculosis. The author concludes that the ophthalmal reaction is always negative in the new-born. This is a proof in favor of the non-heredity of tuberculosis. The absence of this reaction in so large a number of non-tuberculous persons shows that it is never positive when the organism has not been tuberculized.—Via Amer. Jour. Obs. and Dis. Wom. and Child.

DIET IN TYPHOID.

Coleman (J. A. M. A., Oct. 9, '09) "states that there is strong clinical and experimental evidence that the typhoid patient should have sufficient food to meet his energy expenditures and that the starvation diet is detrimental. The amount of food varies with the individual, but he should be given at least food to equal 40 calories per kilogram of body weight. Coleman gives milk, cream, milk sugar and eggs in about these proportions: Milk, $1\frac{1}{2}$ qts; 1-2 pts. of cream; $\frac{1}{2}$ to $\frac{1}{3}$ lb. of milk sugar, and 3 to 6 eggs daily. Patients do

well on this diet and many gain weight."—Via Bost. Med. & Surg. Jour.

TURPENTINE STUPES.

"Turpentine stupes merit more frequent use than at present obtains—a fact no doubt due to error of application, and in consequence uncertain, if not at times unpleasant effects. In the preparation of stupes the temptation is to put the turpentine into the water in the basin. The result is uncertainty, if not defeat of effects. The medication swims on the surface, and when the water is agitated clings to the free rim of the basin above the water. All these disadvantages are overcome by dropping the turpentine (from five to ten drops only) on the flannel cloth and pressing it gently between the palms a few times, after first wringing the cloth from water as hot as the hands will bear. By this method there is no loss. The requirements of the most delicate infant or resistant adult can be met with certainty. In the former, and all stuporous patients, the effect of such applications should always be watched with care."—Med. Council, Oct., '09, via Amer. Med.

PINEAPPLE AS A MEDICINE.

"The medical value of pineapple has recently (Southern California Practitioner) been the subject of considerable inquiry among physicians, and in Hawaii experiments have been made to determine something of these properties. It has been found that the fruit of the pineapple contains a digestive principle closely resembling pepsin in its action, and to this is probably due the beneficial results of the use of the fruit in certain forms of dyspepsia. On the casein of milk pineapple juice acts as a digestive in almost the same manner as rennet, and the action is also well illustrated by placing a thin piece of uncooked beef between two slices of fresh pineapple, where in the course of a few hours its character is completely changed.

"In diphtheritic sore throat and croup pineapple juice has come to be very largely relied upon in countries where the fruit is common. The false membranes which cause the closing of the throat seem to be dissolved by the fruit acids, and relief is almost immediate."—Amer. Med.

Bust of Pasteur Presented.—The Pasteur Institute of Paris has presented to the Rockefeller Institute for Medical Research, New York City, a replica of the bronze bust of Louis Pasteur by Paul Dubois, in recognition of the assistance rendered during the recent epidemic of cerebro-spinal meningitis which prevailed in France.

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKee, M. D., Collaborator.

The following officers were elected January 3 at the annual election of officers of the Academy of Medicine of Cincinnati: President, S. E. Allen; first vice-president, Robert Carothers; second vice-president, W. D. Porter; secretary, E. O. Smith; treasurer, A. G. Drury; librarian, A. I. Carson; trustee, A. B. Isham; censor, E. W. Mitchell; delegates to Ohio State Medical Association, M. A. Tate, C. L. Bonifield, W. D. Haines; member of Auxiliary Committee on Public Policy and Legislation, Ohio State Medical Association, C. A. L. Reed.

A meeting of the Clermont County Medical Society was held at Batavia December 22. The following officers were elected for 1910: President, T. A. Mitchell, Owensville; vice-president, Geo. Rutledge, Owensville; secretary-treasurer, F. A. Ireton, Newtonsville; censors, J. L. Fomarin, E. C. Ireron and W. E. Leever.

An interesting paper by Dr. Thompson, "Relation of Nose and Throat Affections to Lung Disorders," was well discussed.

The Highland County Medical Society met Wednesday, January 5. After the president's address, by H. W. Chaney, and other miscellaneous business, papers were read as follows: "The Insane and the General Practitioner," B. H. Blair, Lebanon; "Some Recent Phases of Joint Disease," Chas. W. Caldwell, Cincinnati.

Butler County Medical Society, at its annual meeting held in Hamilton, elected the following officers: George M. Cummins, Hamilton, president; George D. Lummis, Middletown, William S. Alexander, Oxford, and Clarence C. Wasson, Hamilton, vice-presidents; Corliss R. Keller, Hamilton, secretary; Edward Cook, Hamilton, treasurer.

SECOND DISTRICT

R. H. GRUBE, Collaborator.

The Montgomery County Medical Society met Friday evening, January 21. The program was as follows: "Relation of Cholecystitis and Pancreatitis," F. Dale Barker; "Differential Diagnosis," Webster Smith; "Medical Treatment," C. S. Judy; "Surgical Treatment," William A. Ewing.

The annual reports of the officers and committees were presented.

At the meeting of the Clark County Medical Society on December 27 a post-graduate course was given on chicken pox and eruptions accompanying other acute infectious diseases.

At the special meeting of January 10 a post-graduate course was held by H. H. Austin on "Anatomy of the Uterus," and by Benetta Titlow on "Inflammation of the Uterus."

At the meeting of January 17 the post-graduate course was on "Chronic Endocervicitis and Chronic Endometritis," by Thad McLaughlin, and "Chronic Metritis and Pelvic Inflammation," by Dr. Reichard.

At the special meeting of the society in the Commercial Club rooms on January 24, the post-graduate course was on "Pelvic Cellulitis," by F. P. Anzinger; "Salpingitis," by Read L. Bell, and "Ovaritis-Pelvic Peritonitis," by C. F. Adams.

The joint meeting of the two medical societies of Miami and Shelby counties was held at the assembly room of the courthouse on Thursday, January 6. The attendance was somewhat less than at some former meetings, but the program was carried out in full, and the interest was not diminished by the rather severe winter weather. During the delay occasioned by late trains Dr. Moots, of Toledo, the principal speaker of the day, gave a short talk on the work of the Toledo Milk Commission, a volunteer organization of persons interested in the supply of pure milk for children and invalids. The speaker gave an excellent review of the subject, and as an instance of the possibilities connected with scientific cleanliness in the handling of milk from the udder of the healthy cow to the refrigerator kept at a temperature of 45° he said it was possible to keep the fluid perfectly sweet and palatable for an indefinite time, measured by months. He said he had frequently kept such milk for three weeks as pure and sweet as when it was first drawn from the animal, without the addition of any chemical whatever.

Following this impromptu talk of Dr. Moots, Dr. Costolo gave a graphic and interesting account of the district sanatorium and hospital, of which he is trustee, and of his visit to other similar institutions in the Eastern and Middle states.

At 12 o'clock dinner was announced, which meal had been prepared by the hospitable ladies of the

Methodist congregation and which in all respects was a credit to their well-known culinary skill.

W. H. Snyder, of Toledo, president of the Ohio State Medical Association, was present and in response to the invitation talked for half an hour on the subject of medical organization.

The balance of the program was continued after dinner by Drs. Moots and Shannon.

Dr. Shannon, of Piqua, offered the following resolution:

Resolved, That the editorial published in the Sidney Journal of January 5, 1910, on the subject of advertising by professional men meets with our entire approval, and that we congratulate him on the stand he has taken on this and other subjects which so vitally concern the welfare of the public.

Resolved, That we respectfully request editors and publishers of newspapers to inform themselves upon the underlying principles of that code which has been adopted for the guidance of professional men, the object of which is the protection of the people against the impositions of charlatany and pretense on the part of those whose object it is to defraud and deceive.

THIRD DISTRICT

H. B. GIBBON, M. D., Collaborator.

The following is the program of the Allen County Medical Society for the year 1910:

OUTLINE FOR THE YEAR.

January 4—Medical Organization, Dr. W. H. Snyder; Spinal Anesthesia, Dr. J. H. Jacobson; Postgraduate Work, Dr. F. D. Bain; The Milk Commission, Dr. C. W. Moots.

January 18—Some Prevalent Causes of Disease—From Personal Observation, Dr. S. J. Derbyshire; Discussion, Dr. A. Pfeiffer; Aconite, Dr. M. Bowser.

February 1—Otitis Media, Dr. A. D. Knisely; Discussion, Dr. A. W. Bice; Echinacea, Dr. W. H. Parent.

February 15—Modern Miracles Are Curing the Incurable, Dr. H. C. Bennett; Discussion, Dr. Shelby Mumaugh; Treatment of Syphilis, Dr. L. F. Laudick.

March 1—Anesthetics, Dr. C. S. Gamble; Discussion, Dr. Iva M. Lickly; The Iron Compounds, Dr. E. G. Burton.

March 15—Peritonitis, Dr. Wm. Roush; Discussion, Dr. T. R. Thomas; Opium, Dr. J. B. Vail.

April 5—Carcinoma of the Cervix, Dr. T. R. Terwilliger; Discussion, Dr. H. W. Moellering; Gelsemium, Dr. Fred L. Bates.

April 19—The Consultation, Dr. D. W. Steiner; Discussion, Dr. T. M. Johnson; Treatment of Gastritis, Dr. T. R. Thomas.

May 3—Some Signs of Pulmonary Tuberculosis, Dr. A. S. Rudy; Discussion, Dr. P. L. Tussing; Treatment of Pustular Acne, Dr. J. R. Tilton.

May 17—Rest, Dr. W. E. Hoover; Discussion, Dr. J. B. Poling; Summer Diarrheas of Children, Dr. E. C. Yingling.

June 7—Diseases of the Conjunctiva, Dr. R. D.

Kahle; Discussion, Dr. Oliver Steiner; Mercurials, Dr. S. B. Hiner.

June 21—Constipation, Dr. J. B. Poling; Discussion, Dr. Ezra Burnett; Bier's Hyperemic Method with Report of Cases, Dr. P. I. Tussing.

September 6—Scarlet Fever, Dr. A. H. Creps; Discussion, Dr. C. E. Stadler; Nicotine, Dr. I. F. Steiner.

September 20—The Business Side of the Practice of Medicine, Dr. G. A. Bachmeyer; Discussion, Dr. D. W. Steiner; Treatment of Nephritis, Dr. G. S. Weger.

October 4—Bronchopneumonia, Dr. R. V. Dickey; Discussion, Dr. M. M. Hixson; Alkaloidal Therapy, Dr. L. H. Hauman.

October 18—Amblyopia, Dr. B. E. Leatherman; Discussion, Dr. F. G. Stueber; The Sodium Salts, Dr. A. H. Herr.

November 1—Accidents in the Operating Room—Dr. Iva M. Lickly; Discussion, Dr. J. R. Tilton; Germicides in Recent Wounds, Dr. O. E. Chenoweth.

November 15—Is the Profession of Medicine Keeping Pace with the Allied Sciences—Dr. T. M. Johnson; Discussion, Dr. F. L. Bates; Belladonna, Dr. W. B. Van Note.

December 6—Medical Jurisprudence, Dr. Shelby Mumaugh; Discussion, Hon. J. W. Halfhill. Election of officers for ensuing year.

December 20—The Germ, Dr. G. J. Roberts; Discussion, Dr. Charles Steer; Treatment of Lobar Pneumonia, Dr. J. E. Mulligan.

At the first meeting of the year under the above program, January 4, at Lima Hospital, W. H. Snyder, of Toledo, gave us a splendid address on "Medical Organization," explaining the work of the Committee on Public Policy and Legislation and indicating what measures are to be presented to the Legislature at its present session. Dr. Snyder made a very favorable impression by his plain, practical presentation of what should be accomplished by organized effort.

J. H. Jacobson, also of Toledo, was next introduced and read a very carefully prepared paper, as well as a very interesting and instructive one on "Spinal Anesthesia."

F. D. Bain, of Kenton, councillor of this district, was called and responded with a short talk on "Post-Graduate Work."

C. W. Moots, of Toledo, told of the work of the Medical Milk Commission in that city, how the work was inaugurated and what had been accomplished thus far.

A social hour followed adjournment.

The pleasure of the hour was very much heightened by a very plentiful and palatable collation served by a bevy of smiling nurses under the direction of Miss Margaret Mateer, the efficient superintendent of Lima Hospital.

The second regular meeting of the year was held the evening of January 18. The committee on public health and legislation, consisting

of S. B. Hiner, A. S. Rudy and Shelby Mumaugh, was appointed by the chair.

S. J. Derbyshire read an excellent paper on "Some Prevalent Causes of Disease." The doctor called attention to the fact that in our eager quest of germs we often fail to give proper attention to conditions of the human organism which prepare the wall for the disease germs to enter and find congenial surroundings. A spirited discussion followed and was participated in by nearly all present.

M. S. Bowser followed with a paper on "Aconite," giving an exhaustive review of its introduction into medicine and the experiments performed to show its physiological action; also its place in the treatment of pneumonia, pleurisy and other diseases when indicated.

FOURTH DISTRICT

L. A. LEVISON, Collaborator.

The annual meeting of the Paulding County Medical Society was held January 19, at Paulding. The program was as follows: Address, W. H. Snyder, Toledo, President of the Ohio State Medical Association; address, J. H. Jacobson, Toledo, Councilor Fourth District; election of officers; address, Park L. Myers, Toledo; paper, "Treatment of Drug and Alcoholic Psychoses," D. Ferneau, Toledo; "The Differentiation of Cholelithiasis from Gastric and Duodenal Ulcer," C. N. Smith, Toledo; "Ophthalmia Neonatorum," G. B. Booth, Toledo, lecturer for the Ohio Commission for the Blind.

The Ottawa County Medical Society elected the following officers for 1910: H. J. Pool, president; Fred Ingraham, vice-president; S. T. Dromgold, secretary-treasurer; Fred Heller, delegate.

At the regular monthly meeting on January 12, Geo. M. Todd, of Toledo, read a paper on "Surgery of the Brain," representing the subject by stereopticon views. The meeting was well attended, and the paper was thoroughly enjoyed by all present.

The Medical Section of the Academy of Medicine of Toledo and Lucas County met December 17. F. D. Ferneau read a paper on "The Treatment of Drug and Alcoholic Psychoses." He divided alcoholic and drug users into three classes: (1) Drinkers with abnormal instinct, common drunkards or inebriates, individuals with defective moral sense and lack of moral equilibrium. (2) Drinkers with abnormal tendencies, through taste, passion and lack of mental equilibrium.

(3) Drinkers through impulse. Here alcoholism plays only a secondary part, the principal cause being the pathologic impulse. To this class the name dipsomania has been given, and it is the classic of all intoxication psychoses.

Discussing dipsomania, Dr. Ferneau analyzed obsessions and impulses. The beginning of psychoses vary in degree in direct ratio to the susceptibility and stability of the patient. The preparatory conditions will be, however, that (1) the nerve endings in the mucous membranes of the digestive apparatus have on one occasion been impressed by contact with some stimulant; (2) the impressions are retained by the mind as well defined images; (3) the properties of the stimulant absorbed have produced psychic satisfaction or some special sensation; (4) the sensation is recalled and sudden appetite awakened without any real need; (5) the desire to reproduce the sensation becomes imperious and returns under the form of obsession; (6) the obsession becomes impulse, thus completing the symptom complex.

The habit psychoses are largely found in individuals having a peculiar mental condition, characterized by a defective mental equilibrium. Alcohol or opium is secondary as the impulse is essential. In predisposed individuals every violent moral shock, every physiological disturbance and every circumstance which diminishes organic and mental resistance may produce habit psychoses.

For the treatment of inebriety and narcomania of the advanced type, isolation is absolutely necessary. It is to be fondly hoped that Ohio will follow the plan of some foreign governments and states and maintain psychopathic hospitals for this class of patients. It is hardly fair to those who are unable to procure sanitarium treatment to be incarcerated in insane asylums. Dr. Ferneau stated that a large experience had proved to him that it is not only a waste of time, but a severe hardship to the patient in mental anguish and suffering to allow him to go out upon his own resources within six months to one year after all symptoms have subsided.

Therapeutic measures in all forms of acute alcoholism can be directed merely to combatting individual symptoms. Lavage of the stomach, liquid diet helps to allay the troublesome gastritis. Insomnia may be combatted by choral (gr. xx) and bromide (gr. xx). Apomorphine and hyoscine may be useful. Whiskey will lessen the delirium in incipient cases. Ergot has been found very useful in uncomplicated cases and is given in dram doses every three to four hours.

Chronic alcoholism calls for no immediate treatment. To treat them at home is a waste of

time. They can only be treated by taking them absolutely away from alcohol.

In the treatment of narcomania, morphine will be used as illustrative of the group. The greatest obstacle is that these patients do not want to be cured. "The morphinist has the delusion that he is able to control his condition and can stop the use of the drug at any time. The idea of free will is always present, but the inability to exercise it is never explainable in any way." The first thing in the treatment is to secure control of the patient. Isolation is necessary. Three methods are used: (1) The immediate and entire withdrawal; (2) rapid withdrawal, extending over three or four days; (3) gradual withdrawal, lasting two or three weeks.

Dr. Ferneau believes gradual withdrawal is the treatment par excellence. It is generally supposed that the withdrawal symptoms are due to a leucomain. Active elimination is very important. Hydrotherapy is very useful as an eliminative measure and to allay restlessness. The Lambert treatment was described in full by Dr. Ferneau.

Attention was called to congenital morphinism. A number of cases of this have been reported, with death during the first few days of life. They show all the symptoms of withdrawal collapse. This fatality can be prevented by giving the child small decreasing doses of tinc. opium.

Park L. Myers read a paper entitled "Motion. Real and Apparent."

FIFTH DISTRICT

H. G. SLOAN, M. D., Collaborator.

The Medico-Legal Section of the Cleveland Academy of Medicine held their regular meeting in the auditorium of the Cleveland Medical Library Thursday evening, January 27. The program was as follows: "The Traumatic Neuroses from the Medical Point of View," Archibald Church, professor of nervous mental diseases at Northwestern University Medical School, Chicago; "The Traumatic Neuroses from the Legal Point of View," W. C. Boyle, LL. D., Cleveland, and Glenn A. Boone, LL. B., Pittsburg.

At the annual meeting of the Lorain County Medical Society, December 14, 1909, the following officers for the ensuing year were elected: President, J. S. Mead, Lorain; vice-president, S. S. Cox, Lorain; secretary, L. D. Hurd, Lorain; treasurer, E. E. Cameron, Elyria; censor, O. T. Maynard, Elyria.

The regular monthly meeting of the society was held January 11, J. S. Mead presiding. The program was as follows: "Pneumaturia," Bert

Garver; "The Use of Lactated Milk in Infantile Diarrhea," S. S. Cox; "Touring Europe on Motor Cycles," A. M. Webster. The papers were very interesting, and unusually free discussion followed.

The Ashtabula County Medical Society held its forty-ninth regular meeting Tuesday evening, January 4, in the rooms of the Ashtabula Business College, with a good attendance. C. L. McDonald, of Cleveland, read a paper on "Treatment of Infections by Vaccine Therapy," and B. C. Eades, of Conneaut, gave a paper on "Nosstrums Versus U. S. P. and National Formulary Preparations."

Officers have been elected as follows for the Lake County Medical Society for 1910: J. W. Lowe, president, Mentor; C. F. House, vice-president, Painesville; H. L. Spence, secretary, Painesville; C. M. Hawley, treasurer, Painesville; C. H. Quayle, delegate, Madison; T. M. Moore, auxiliary committeeman, Willoughby.

At the meeting the following program was followed: Annual banquet; minutes of last meeting and reports; miscellaneous business and payment of annual dues; installation of officers; presentation of cases; address by Homer Harper; discussion.

The Erie County Medical Society celebrated the commencement of the year with a banquet to which they invited their wives. The occasion was honored by the presence of W. H. Snyder, of Toledo, President of the Ohio State Medical Association; J. H. Jacobson, Toledo; Clyde E. Ford, and H. G. Sherman, Cleveland, all of whom gave appropriate addresses. The toast, "The Lawyer and the Doctor," was responded to by Mr. Roy Williams, and "The Minister and the Doctor" was responded to by Rev. W. Ashton Thompson.

SIXTH DISTRICT

A. J. MARCH, M. D., Collaborator.

The Portage County Medical Society met in Kent January 13. E. P. Morrow, of Canton, representing the Ohio Commission for the Blind, was present and addressed the society on "The Prevention of Unnecessary Blindness."

E. W. Price, of Kent, addressed the society on "The Diagnostic Signs of Diabetes Mellitus." The communication from the legislative committee received the hearty support of the society, sanctioning the bills to be presented before the Legislature. The election of officers resulted as follows: President, W. W. White, Ravenna; vice-president, Geo.

J. Waggoner, Ravenna; secretary, C. O. Jaster, Ravenna; treasurer, E. J. Widdecombe, Kent.

The annual banquet of the Richland County Medical Society, held Wednesday evening, January 26, at the Southern Hotel, Mansfield, was attended by about fifty of the medical practitioners of the city and county and was one of the most interesting and enjoyable meetings ever held by the Society.

Following an elaborate dinner, served at 8 o'clock, there was a program of addresses and short talks, during which W. E. Loughridge, President of the county organization, presided as toastmaster. An excellent address on the state organization was delivered by T. Clark Miller, of Massillon, Councilor for the Sixth District of the Ohio Medical Association, after which Dr. Lowman, one of the professors in the medical department of the Western Reserve University, Cleveland, spoke of the possibilities of increasing the scope and usefulness of the county organization by activity along the line of city sanitation, sewage disposal, prevention of epidemics, etc. A dozen or more local physicians then gave short talks on the opportunities for bettering and strengthening the county society. Resolutions upon the death of Dr. George Mitchell were read and passed.

It was rather out of the ordinary for Mansfield to be represented at this meeting by four lady physicians, it being unusual for a city of this size to have four ladies engaged in the practice of medicine.

The lady physicians present, in the order of their length of practice in this city, were: J. Lillian McBride, Margaret Golden, Susan W. Friend and Lydia DeVilbiss Shauck. The ladies were given places of honor at the banquet.

SEVENTH DISTRICT

S. O. BARKHURST, M. D., Collaborator.

At a meeting of the Harrison County Medical Society, held at Cadiz December 21, J. C. M. Floyd, of Steubenville, gave a very interesting talk on "Etiology and Therapy of Abortion." O. A. Hess, of Harrisonville, had a very carefully prepared paper on "Chronic Interstitial Hepatitis."

ADDRESS OF THE PRESIDENT, JAMES A. McCOLLAM.

Questions for the Tuscarawas County Medical Society to solve, New Philadelphia, Ohio, January 4, 1910.

It is not my desire to read a paper before you today but simply to give a President's address, in which I shall discuss some of my opinions upon

questions confronting us as physicians. I fully realize the great honor you have conferred upon me by electing me President for this year, but assure you that it means no honor to me except as it affords opportunity for larger service. I need not tell you of the interest I have in the society, nor of my willingness to make the work of the society mean all that it should mean, but no one man can do what can be done by our combined efforts; and I present this paper that in its discussion I may get the opinions and advice of the members in order to properly outline a policy for this year.

It is a lamentable fact that the medical profession does not appear to have the respect of the laity as it should, and we will do well if we can decide as to the cause of this condition and what to do to regain that respect.

Belonging to a learned profession does not mean so much now as it did a few decades ago, because in every community here are college graduates who are not more successful (as the world counts success) than others without the superior education. This may account in a small measure for the change of sentiment, people thinking of doctors earning their money easily, instead of as belonging to a learned profession; but I believe the most of the trouble is in the professional ranks. With some qualifications it may be said that the noble, charitable, sacrificing, etc., medical profession is a minus quantity at this time. The public can not see much that doctors do for the public welfare for which they do not ask pay. I believe the professional ideal is higher in this county than in many places, yet not long ago we discussed the advisability of demanding pay for reporting births, after we had asked the Legislature to pass the registration law. We boast of the medical fraternity of Uhrichsville and Dennison, yet in our club meetings we have discussed making the township pay for services rendered all poor people and deadbeats. We boast of our nobility and hear all too often of some of our number who for a little money will produce abortions. We talk of our code of ethics and to the public the code means that in consultation one doctor will lie and the other swear to it.

These are a few of the facts from which the public gets an unjust idea of the doctors as a class.

The profession owes it to the world to study why such a vast army are marching daily into the hospitals, many of them coming out dead or crippled; and we owe it to the future to know why there is such a large percent of barren marriages, and so many families with only one child; then there is a large part of the legal divorce problem

that doctors must solve—think of the newspapers reporting 44 divorce cases and eight alimony suits filed from September court to December 15 in Tuscarawas county! Tuberculosis and cancer are big questions before the profession, but more people in Tuscarawas county suffer from rheumatism, nerve disorders, disturbances of digestion, headache and other troubles which we owe it to ourselves and our patients to be able to treat and relieve. Some time ago I read these sentiments: "There is no excuse for a civilized people that can not show more than one sound man in one hundred. Yet this is not far from what we have come to. Nervous exhaustion is a characteristic of population in mid life. Indigestion and its accompaniments characterize the business man. Our daily conversations turn to aches, and pains, and decays, to a shortage of power that is due to ignorance of the law of wholeness or to an irrational use of our knowledge. Our composite nature made up of a dozen nationalities crudely mingled has left us with no physical ideals.

Our schools educate but do not make *men*. We are making more cowards—have more suicides—people educated, but no good. Like squirrels and mice only laying up a pile, and if we fail to make that pile, or if the pile does not satisfy, life is a failure. But in the language of H. M. Brachen at Atlantic City: "It is not conditions alone but the methods of dealing with conditions that we want to study." I believe we are a unit as to the desirability of the medical profession regaining its proper standing with the people of our community. The society adopted a resolution at its last meeting that we should have one or more public meetings each year, and this is a very important step; we need to stop studying surgery and give some time to studying prophylaxis and some of the sociological questions of so much interest to the public, and if we can decide on the proper plan and will each make it his individual plan and work at it we can make it a success. I presume we will not be able to accomplish much in one year, but we can begin and learn as we proceed. I wish to suggest that we have a public meeting in each of the centers, Newcomerstown, Uhrichsville, New Philadelphia and Canal Dover, and that one of the following policies be adopted: Invite the public and have discussed subjects of general interest but of special interest to teachers in the public school, such as tuberculosis, contagion, school sanitation and ventilation, influence of defective sight and hearing on education, and have the meetings in the school buildings, giving special invitations to the teachers. Also on the same general plan discuss questions of special interest to the clergy, such as the liquor problem,

the social evil, the Emmanuel movement, or the divorce question, and send special invitations to the ministers. Or, discuss questions that would interest the women's clubs, such as the influence of modern home life and dress and food on health, or heredity and environment, or the influence of patent medicines, calling especial attention to the babies sacrificed annually to soothing syrup, cough syrup, etc., and invite the women's clubs.

At these meetings it should be the aim to have the visitors take part in the discussion and this could more easily be accomplished in the small audiences which we would likely have than if we had a large crowd. The facts are that now—whether it is true or not—the public thinks that our meetings are like the secret meetings of the trusts and, regardless of what we say, think the object of our meetings is purely selfish.

Now every point in this paper is for your discussion. The points you are especially asked to consider are—shall we have open meetings in each of the larger towns? What kind of programs? Shall we make special efforts to interest any certain class? Shall we have the same kind of meetings in each place? Will you help? Shall we have the papers discussed before the society alone before being presented in the public meeting? Or shall we have round-table discussions instead of papers? What suggestions as to reporting our meetings to the press?

Of course, these thoughts are intended to be merely suggestive, and the program committee will welcome suggestions along any other line that would be for the enlarging the usefulness of the T. C. M. S.

EIGHTH DISTRICT

CHAS. H. HIGGINS, M. D., Collaborator.

At the annual meeting of the Eighth District Medical Society, held in New Lexington, December 2, William A. Melick, Zanesville, was elected president, and William E. Wright, Newark, secretary.

NINTH DISTRICT

S. P. FETTER, M. D., Collaborator.

The officers of the newly organized Hocking County Medical Society are as follows: President, W. S. Rhodes, Carbon Hill; vice-president, J. H. Elias, Murray; secretary and treasurer, E. H. Hayman, Murray; censors, W. H. Tippie of Murray, A. P. Lee of Murray, and Wm. D. Porterfield of Jobs.

Following the election of officers held at its rooms in the Carnegie Library building on Mon-

day afternoon, the Hempstead Academy of Medicine banquetted at the Washington at 9 o'clock Monday evening. There was a good attendance of members, fully twenty-five being present. A number of members who expected to be on hand were unavoidably absent owing to business that detained them elsewhere.

George Marshall acted as toastmaster and after making an introductory address called on practically every member present for a short talk, and there were none who hesitated to respond, although several physicians received calls from patrons and were compelled to leave the hall before the evening's pleasures had advanced very far. Dr. Marshall made an ideal officer, and he knew just how to drag reluctant members to their feet. As a matter of fact, Dr. Marshall not only made the introductory address, but throughout the evening, in the language of Shakespeare, he "was wont to keep the table in a roar," as one member expressed it.

The talk by Dr. Schirrmann on "Weather Prognostications" was a most interesting one and created much merriment and amusement. He incidentally gave figures and statistics dealing with weather conditions of the past and especially of the present season. Dr. Schirrmann is of the official weather reporter and knows whereof he speaks.

At the election, held at the afternoon session, the following officers were elected for the current year: Board of trustees, Drs. Fitch, Obrist, Test, Jordon, Micklethwait, Smith and Moore. The board selected Dr. Fitch for president and Dr. Obrist for vice-president. The other officers are as follows: Secretary, Dr. Hardin; treasurer, R. O. LeBaron; censors, P. J. Kline and D. A. Berndt.

The Pike County Medical Society met in regular session January 5. E. M. Dixon, of Stockdale, read a very interesting paper on "Hysteria," which was discussed by all the members present.

The Jackson County Medical Society met December 7. The following officers were elected for 1910: President, W. R. Evans, Jackson; vice-president, D. W. Davis, Wellston; secretary, W. J. Ogier, Wellston; treasurer, D. W. Davis; censor, J. H. Ray, Coalton.

A. G. Ray, of Byes, read a very interesting paper on the subject of "Albuminuria." The paper was discussed by the members present.

The Vinton County Medical Society held its annual meeting in the offices of Dr. Cherry, at McArthur, December 22. The following officers

were elected for 1910: President, W. H. Henry, Hamden Junction; secretary, W. T. Cherry, McArthur; vice-president, J. W. Murphy, Eagle Mills; treasurer, O. S. Cox, McArthur; delegate, W. H. Henry; alternate, C. O. Dunlap, McArthur; censors, C. O. Dunlap (1911), J. W. Murphy (1912), W. H. Henry (1913). H. S. James, New Plymouth, was received on dimit from the West Virginia State Society. W. A. Westervelt, Zalski, was elected to membership. The society is well organized considering the number of physicians in the county.

At a meeting of the Meigs County Medical Society, held January 5, D. B. Hartinger was elected president, Byron Bing vice-president, and Jane N. Gilliford secretary-treasurer.

TENTH DISTRICT

FRED FLETCHER, M. D., Collaborator.

At the regular meeting of the Columbus Academy of Medicine, January 3, the report of the medical progress committee was presented. D. N. Kinsman, chairman, presented a review of the subject of medicine. Frank Winders reviewed the subject of therapeutics.

The following members hold offices in the Academy: J. A. Van Fossen, president; Fred Fletcher, secretary-treasurer; E. W. Euans, vice-president; J. U. Barnhill, P. D. Shriner and V. A. Dodd, delegates to the state convention; J. M. Dunham, J. H. J. Upham, E. J. Wilson and J. M. Thomas, members of the board of trustees; J. H. J. Upham, chairman, and Yeatman Wardlow, C. A. Cooperrider and G. M. Waters, members of the medical progress committee; C. O. Probst, chairman, and Ernest Scott and Howard Whitehead, members of the public health committee; T. W. Rankin, chairman, and G. T. Harding and R. C. Tarbell, members of the legislative committee; F. W. Blake, chairman, and D. L. Moore, and Sherman Leach, members of the library committee.

At the meeting of the Academy on January 17 the following papers were read: "Some Indian Experiences in the Extraction of Cataracts," by C. F. Clark; discussion by F. W. Blake, J. L. Brown and J. B. Alcorn. Dr. Clark's paper appears in full in the January number of *THE JOURNAL*.

In a paper on "The Removal of the Cataractous Lens Within Its Capsule," read by J. W. Wright December 6, the essayist stated that he had been making operations for the extraction of cataracts since 1873, at first according to the prevalent method of Von Graefe, but in his first few years' experience, occasioned mainly by some fortuitous

circumstances, he conceived a procedure for removing the lens and surprised his hearers when he presented a copy of the *Columbus Medical Journal* of October, 1884, wherein this procedure was published, recommending that after the incision is made, the first effort should be to dislocate the lens and remove it within its capsule before a capsulotomy is attempted. The technic of the operation in brief is as follows:

The incision is made with a Graefe's knife and is entirely within the cornea. The puncture and counter-puncture are made near the sclero-corneal border, about one-third way down from the upper border of the cornea, and the knife cuts upward and outward at an angle of 15 degrees with the plane of the iris. The upper border of the incision is then depressed with the fingers and the lens removed, without, if possible, either rupturing the capsule or performing iridectomy, although either of these operations may be performed if necessary. The operation is made without the use of the speculum and fixation forceps, and frequently with but one instrument, a Graefe knife.

Since his conception of this procedure the essayist stated that he has operated almost 900 cases and that he is reasonably sure that he has removed the lens within its capsule in at least one-third of them.

Dr. Wright does not maintain that all cases of cataract can be so operated. The first step after the incision is made is to dislocate the lens, which step is described as being accomplished by pressure applied upon the upper segment of the incision, thereby breaking the attachment of the suspensory ligament to the lens at its upper border. The lens now slips from its attachment through the opening and its delivery is thus safely affected. The essayist cautions against indiscreet pressure and insists that it requires both dexterity and experience to enable one to secure the tactus eruditus indispensable in the successful performance of this very intricate operation.

In reporting three cases of Gummata of the stomach, J. M. Rector said that "syphilitic disease of the stomach was by no means rare, and that the gastric lesions during the tertiary stage took the form of erosions, ulcers, gumma or stenosis." He pointed out that syphilitic strictures occurred in the esophagus and pylorus as frequently as in the sigmoid and rectum. He quoted Engle in saying that "in one hundred cases of gastric ulcer, ten percent gave a syphilitic history." In the three cases (reported) having palpable gummata, a peculiar tough yellow, tenacious mucous appeared in the stomach washings when silver nitrate was used.

Male, engineer, was seen in consultation October 2, 1907. The patient had always been strong,

and had had no severe constitutional maladies in recent years. He gave the history of having acquired syphilis at the age of twenty-five, and had taken internal medication at interrupted periods. For ten years after the infection he used alcohol to excess. In recent years he has taken his meals at irregular intervals, and has neglected his oral hygiene. He has suffered intermittently with regurgitation and vomiting; has had pain in the epigastrium, and periodic attacks of constipation, followed by diarrhea. Recently he has complained of severe headaches and vertigo, and for a week or more has been confined to bed.

At the time of my examination the man was unable to retain food, vomited large quantities of foul-smelling material, and was in a semi-comatose state. The stomach was prolapsed and dilated, and there was a palpable, movable tumor in the region of the pylorus. The stomach tube was introduced and a large quantity of decomposed food removed, which contained pus and blood, and showed HCl, pepsin and rennet. The patient was taken to the hospital and after several days of observation the diagnosis of gastric gumma was made. He was given intermuscular injections of a 2% solution of bichloride, once daily, and large doses of potassium iodide. The stomach was lavaged daily with a 1-2000 solution of silver nitrate. Daily hot packs and salt glow were given for three weeks, at the end of which time the stomach emptied itself promptly; the tumor disappeared, and the patient had an uninterrupted convalescence.

Dr. Rector read the histories of two other cases and said that, all told, he had treated six cases of syphilis of the stomach.

The regular monthly meeting of the Knox County Medical Society was held at the courthouse, Mt. Vernon, January 14. The program was as follows: "Differential Diagnosis of Smallpox," F. C. Larimore; "Bacteriology of Scarlet Fever and Smallpox," J. F. Lee; "Prevention of the Spread of Exanthemata; Vaccination and Quarantine; Treatment of the Patient; Disinfection," D. H. W. Blair.

Officers were elected as follows: W. H. Eastman, re-elected president; I. S. Workman, Gambier, secretary.

Regular meeting of the Delaware County Medical Society, January 7, at 8 p. m.

The following officers were elected: A. J. Pounds, Delaware, President; G. W. Morehouse, Delaware, Secretary.

The retiring President, J. S. Woodworth, read a paper on "Specific Urethritis with Sequelæ." The attendance was large and the paper thoroughly discussed.

For the meeting February 4 the following paper was announced, "Infantile Mortality and Its Prevention," by J. H. Miller.

NEWS NOTES

The Obstetrical Society of Cincinnati, at its meeting of December, 1909, was the guest of the West End Medical Society of Cincinnati. The paper of the evening was read by Edward J. Kehoe, candidate for membership, on "Venereal Diseases; Ante-Partum, Partum and Post-Partum Effects." The paper was freely discussed and the doctor was elected to membership.

Mark Brown, health officer of Cincinnati, resigned January 1, and J. H. Landis, of the health board, was appointed health officer. O. L. Cameron succeeded Dr. Landis as a member of the health board.

The annual dinner of the Society of Internes at the Cincinnati Hospital was held at the Hotel Alms on December 5. The election of officers for the ensuing year followed.

The Anti-Tuberculosis League and the Day Camp Association, two rival organizations in Cincinnati with the same object, completed their amalgamation December 14.

The Cincinnati Polyclinic and Post-Graduate School held its annual meeting December 14 and selected the following officers for the ensuing year: President of the board of trustees, Chas. T. Souther; secretary, Oscar Stark; dean of the faculty, Chas. L. Paul; secretary, Otto Juettner; treasurer, L. J. Krouse; registrar, Oscar Stark; librarian, E. S. McKee; director of clinics, A. E. Hussey. Other members of the faculty are G. W. Miller, A. R. Connor, A. W. Nelson, Joseph W. Ricker, W. C. Kendig, F. L. Ratterman, F. Hoefler McMechan, G. E. Malsbary, Hugo Aufm-wasser, Will C. Harris, A. G. Kreidler, Travis Carroll and A. F. Morgenstern.

BILLS ON BEHALF OF STATE BOARD OF HEALTH.

Charles O. Probst, Columbus, secretary of the State Board of Health, has prepared three bills to be introduced in the Legislature, the first authorizing the establishment of a bureau for the prevention of infectious diseases and providing for the division of the state into not to exceed twelve districts, with the appointment of a properly qualified physician as medical inspector for each district to enforce health and sanitary regulations; the second authorizing the State Board of Health to manufacture antitoxin for the cure and prevention of diphtheria for free distribu-

tion, and the third providing that all school children shall be examined annually by their teachers and tested for sight, hearing and obstruction of breathing.

The Columbus Pasteur Institute, \$5000 capital stock, was incorporated last month by Dr. D. N. Kinsman, Ernest Scott, Frank Winders, H. A. Horton and H. M. Platter. The purpose is to establish sanitariums for the treatment of mad dog cases.

DEATHS

William Murdoch, Cleveland University of Medicine and Surgery, 1873; died at his home in Akron, January 2, from pneumonia; aged 67.

H. W. Wagner, Columbus Medical College, 1879; died at his home in Newark, January 3, from cerebral hemorrhage; aged 58.

George Mitchell, Medical College of Ohio, 1862; died at his home in Mansfield, December 17, pneumonia; aged 72.

J. J. Weeks, years of practice, died at his home in Cleveland, December 9; asphyxiation; aged 81.

J. F. Liken, Western Pennsylvania College, died in St. Vincent's Hospital, December 11, two weeks after an operation for appendicitis; aged 45.

W. W. Barber, Eclectic Medical Institute, Cincinnati; died at his home in Cumminsville, December 20; aged 39.

J. F. Conneffe, Medico-Chirurgical College, 1907; resident physician at the State Hospital, Columbus; died at that institution after a few days illness from typhus fever contracted in Mexico, January 20; aged 32.

Harry T. Simmons, a junior student at the Western Reserve Medical College, Cleveland, fell in a hospital clinic recently, sustained a fracture of the base of the skull and died on the operating table.

MARRIAGES

C. S. Ordway, Toledo, to Miss Marion F. Sweet, of Green Bay, Wis., December 25.

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ORIGINAL ARTICLES

THE X-RAY EXAMINATION OF THE STOMACH.

SIDNEY LANGE, M. D.,

Radiographer to the Cincinnati Hospital.

[Read before the Ohio State Medical Association.]

The purpose of this paper is to call attention to the value of the X-ray as an aid in the clinical examination of the stomach. Only the bare facts are here presented stripped of all technicalities.

Without entering into the history of the development of this work, we must pause to mention the name of Rieder, who in 1904 first gave large doses of bismuth and thus laid the foundation for this work. The technique may be briefly outlined as follows:

The stomach is partially or almost completely filled with a suspension or an emulsion of a bismuth salt. The bismuth may be given in a pure carbohydrate vehicle as in cornmeal mush or following an ordinary mixed meal. For routine work the best vehicle is kefir (a fermented milk), as recommended by Pfahler, which represents a mixed meal and which holds the bismuth in suspension for many hours. The amount of vehicle used varies from 10 to 32 oz., depending upon the capacity of the stomach. Ordinarily 16 oz. is used. The amount of bismuth varies from 2 to 4 oz. I formerly used the bismuth subnitrate and in a series of about thirty cases, failed to note any untoward effects. Indeed, the patients did not complain of even constipation after doses of 2 to 4 oz. Owing to the recent reports of toxic symptoms following the use of the subnitrate, I am now using the subcarbonate and the oxychloride of bismuth. This eliminates all danger from the subnitrate acid radical. After the administration of the bismuth the case is studied with the fluoroscopic screen, observing all the necessary protective measures, and at various stages and intervals, skiagrams are made. The salient points of this method of examination and its advantages may be summed up as follows:

1. This method enables us to outline with great accuracy the position, shape and size of the stomach. The lesser curvature as well as the greater is shown.

2. The motor power of the organ may likewise be ascertained.

3. All examinations are made in the erect posture, the normal human attitude.

4. During the examination the stomach is filled with ordinary food approximating in bulk, weight and composition an ordinary meal, thus approximating a more normal condition than the clinical methods of inflating the stomach with gas or giving a small quantity of water and examining in the recumbent position.

5. The method causes no inconvenience to the patient.

The normal stomach anatomically considered is perhaps hard to define. Cunningham says "probably no organ in the body varies more in size within the limits of health than the normal stomach, moreover it changes its shape so rapidly after death that measurements made on the softened relaxed organ are not only worthless but misleading. Clinically, the normal stomach is one that empties itself within the normal time. The X-ray studies up to the present time are largely anatomical. A more closely associated clinical study is necessary to verify the tentative conclusions. The older anatomies place the stomach high up in the abdomen with a horizontal or slightly oblique long axis. The greater curvature is pictured as sweeping horizontally across the abdomen two to three inches below the xiphoid process.

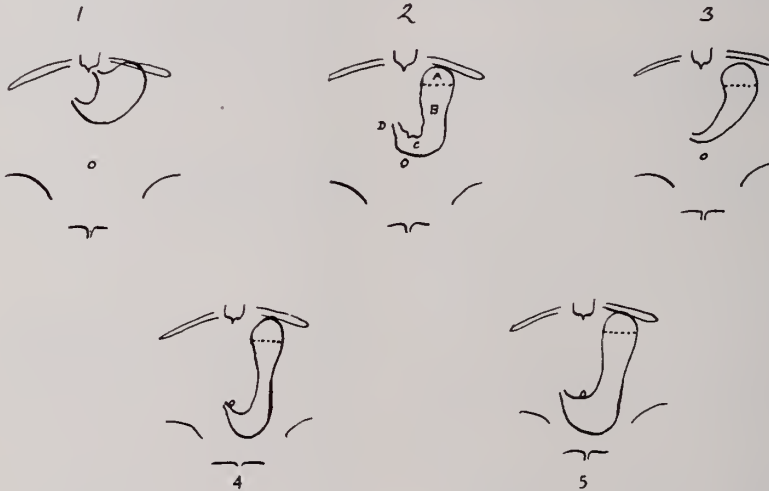
The stomach as outlined by the X-ray is seen to be almost vertical, inclining a few degrees to the right. It lies almost entirely upon the left side of the median line, only the pylorus and part of the antrum pylori crossing to the right. Its upper pole usually hugs the diaphragm and is occupied by a gas bubble, the food never filling the stomach completely. The cardiac pole is a fixed point, fixed by the attachment of the œsophagus. The lower pole of the food-distended stomach reaches almost to the umbilicus. Between the

upper and lower pole the stomach is almost cylindrical. The normal configuration of that part of the stomach from the lower pole to the pylorus is an unsettled point. Most commonly that part of the stomach from the lower pole to the pylorus is tilted upward obliquely, or almost vertical, the pylorus being several inches higher than the lower pole. This type Rieder considers normal, terming it the fish-hook type. It harmonizes well with our idea of the physiology of the stomach. Groedel found this type in 91 out of 100 cases examined. Holz knecht found that while the fish-hook type was the most common, there was another type recurring from time to time representing about 10% of the cases. In this type the pylorus itself constitutes the lower pole of the stomach—the path from the upper pole to the

ment, a notch in the lesser curvature appears, the incisura of His, and at times a notch in the greater curvature. This peristaltic constriction of the stomach has given rise to the faulty X-ray diagnosis of hour-glass stomach.

The fact that the stomach may be divided into two parts has long been known, and the X-ray bears this out, the vertical cardiac portion serving as a reservoir and exhibiting slight peristalsis, separated from the horizontal or U-shaped pyloric portion which exhibits very active peristalsis. It is in the pyloric portion that the active churning of the food occurs, and it is here that the digestive glands are most numerous.

Upon the basis of the above phenomena, Groedel explains the mechanical utility of the fish-hook type. The well-known principle of the el-



LEGENDS.

1. The usual text-book stomach.
2. The normal stomach as revealed by X-ray; patient erect. (Rieder or fish-hook type.)
- a. Gas bubble.
- b. Vertical, descending or cardiac portion.

- c. Horizontal, ascending or pyloric portion.
- d. Pylorus.
3. A less common type of normal stomach. (Holzknecht's cow-horn type.)
4. Ptosis. (Note low pylorus.)
5. Enlargement.

pylorus being an oblique curve. This type he termed the cow-horn type, considering it normal, because mechanically it aids drainage. (See diagram.)

If we watch with the fluoroscope the path and disposition of the bismuth mush as it enters the stomach much may be learned regarding the physiology of the organ. The bolus enters the cardiac orifice, passes a little distance to the left and then sinks down in the lower pole of the cardiac portion of the stomach. As the cardiac portion or descending portion fills peristalsis begins, and as the musculature becomes tonic the lower pole will rise one-half to one inch. The horizontal pyloric or ascending portion now slowly fills and comes more distinctly into view. The shape of the stomach now varies from moment to mo-

bow trap under washstands and drains is made use of. In the hollow of the U-shaped pyloric portion the heavier, coarser particles collect and remain for further churning, while the finer particles flow over the top and pass out the pylorus. The antrum pylori acting as a pressure and suction pump, forcing the food through the open pylorus, and relaxing when the pylorus closes, sucks more food from the cardiac portion or reservoir.

As indicating the motility of the stomach, it has been found that the Rieder bismuth carbohydrate meal leaves the stomach in two to three hours. If bismuth is added to a mixed meal containing fats and proteids the time is of course prolonged. To determine the presence of retention of the various grades, the examination may be repeated

at the end of six to ten hours, and again the following morning.

Attempt has been made to utilize the bismuth method to determine the secretory power of the stomach by Jolasse and Schwartz. They give bismuth enclosed in gold-beater's skin in the form of small pills and attempted to determine the acidity of the gastric juice by the time required for the dissolution of the skin and the liberation of the bismuth. Dissolution in $2\frac{1}{2}$ hours being normal, $1\frac{1}{2}$ hours indicating hyperchlorhydria, and if undissolved in five hours, anacidity. This procedure has no practical value however, unless it should be in a case, where for some reason the stomach tube cannot be passed.

Interest in this work naturally centers about the recognition of the abnormal position and size of the stomach.

In the bismuth examination, natural conditions are closely approximated. The stomach is distended with ordinary semi-solid food whose weight and volume do not exceed that of a full meal, the Rieder meal weighing 16 oz., while the fluid emulsions vary from 6 to 32 oz. In a dilated stomach it may be necessary to administer more than 32 oz. to distend it. The examination is carried out in the erect position, the normal posture for the human body.

The bismuth-filled stomach with the patient in the recumbent position is several inches higher than when the patient is erect and it loses its fish-hook outline and becomes sandal-shaped. The inflated stomach rises much higher in the abdomen than the food-distended stomach and takes on a rounded contour. Inflation distends the stomach too uniformly and is certainly not a normal state of affairs. Gas buoys the stomach up under the diaphragm while food pulls it down. Accurate percussion of the inflated stomach may be interfered with by a distended colon; and as the median line is approached percussion becomes more difficult because of the deeper position of the pylorus, and because of the fact that the pyloric part of the stomach may be contracted almost to the size of the duodenum and not inflated. For these reasons Holzknecht remarks, "Clinical literature is as yet unacquainted with the normal stomach."

In discussing the low stomach and the large stomach, the terms ptosis and enlargement are purely anatomical terms, and should not be regarded as synonymous with the clinical terms, atony and dilatation. Quoting Boas, "It is a mistake to make the size of the stomach a criterion in deciding upon an existing atony or dilatation." The presence of motor insufficiency is necessary to establish these clinical conditions.

While the older anatomists place the lower pole of the stomach, somewhere between the xiphoid and the umbilicus, Quain, Musser and Butler state that the distended normal stomach may reach the umbilicus, and it is the uniform observation of X-ray workers that the normal stomach reaches from about one inch above, to the level of the umbilicus, although in multipara with flaccid abdomen the normal stomach may reach several inches lower.

In perhaps a majority of all cases examined by the X-ray the lower pole of the stomach extended below the umbilicus. Most observers are convinced that in a majority of individuals there is present a ptosis of moderate degree. No less an authority than Virchow himself is credited with this assertion.

The X-ray picture of ptosis is that of a greatly elongated stomach with the lower pole hanging low down in the abdomen like a sack with the pylorus at a higher level than the lower pole, although lower than normal. The capacity of the stomach is not necessarily increased for the elongated cardiac portion is usually very narrow in consequence of the stretching. The tonus may be well maintained and the stomach empty itself within the normal time.

Some enlargement usually accompanies the ptosis. Pancoast in a large series of examinations found some enlargement accompanying the ptosis in all but two cases. In only two cases was enlargement found without ptosis. The ptosed stomach readily loses its tonus and its form gradually changes over into ectasis with an increase of the distance between the lesser and the greater curvatures and with a broad sack-like appearance of the lower pole. The ptosed stomach maintains its general shape, although stretched, while the enlarged stomach becomes sack-like.

As to the cause of the great frequency of gastropnoia Holzknecht believes that loss of support of the abdominal wall is the chief factor, for it can be shown upon the fluorescent screen how retraction of the abdomen elevates the stomach. The probable effect of an abdominal bandage upon the position of the viscera can be determined in this way. After adjusting the bandage with the patient in the recumbent posture, the patient may again be examined with the X-ray to see if the bandage is adjusted properly, lifting up rather than pushing down the viscera, as will be the case if the pressure is made too high.

Since the cardiac orifice is a fixed point at the left side of the eleventh dorsal vertebra, the stomach as a whole cannot drop. Upon this basis Groedel argues strongly for the adoption of the

term pyloroptosis instead of gastropptosis. Worden, in 32 cases showing gastropptosis, found the pylorus below the level of the umbilicus in 28 cases. Pancoast, in his study of over 100 cases of gastropptosis, likewise found the pylorus uniformly low.

In spite of the fact that most anatomists and the dead-room reports of Oestreich tell us that the pylorus is a fixed point and that while it may move from right to left it cannot move up and down, Groedel noted in cases of ptosis an actual migration of the pylorus upward when the patient lay down.

A low pylorus or rather a pylorus at the lower pole of the stomach, is, according to Holzknrecht, Goldammer and Pfahler, the criterion of a normal stomach, being the most advantageous state of affairs for the prompt emptying of the organ. But in gastropptosis, since the cardia is a fixed point, a dropping of the pylorus can occur only by a stretching of the stomach musculature and a consequent impairment of tonus. Although the pylorus is low in these cases of ptosis the greater curvature usually sags lower and this interferes with rather than aids the passage of the food into the duodenum.

It is generally admitted that the diagnosis of splanchnoptosis may sometimes be in doubt (in the absence of a floating kidney) and since the X-ray will show accurately the position of stomach and colon, the practical value of the X-ray is at once established. Whether simply from the low position of the greater curvature we can, on purely mechanical grounds, infer abnormality in gastric function is still doubtful, although this is assumed without argument by most X-ray writers on this subject.

An advantage of the X-ray method is the fact that it brings out the lesser curvature as well as the greater. Pancoast attaches much importance to the contour of the lesser curvature in cases of ptosis. In certain cases, he noticed a deep kink in the lesser curvature due to extreme relaxation of the gastro-hepatic ligament, and apparently interfering with the onward passage of the food from the cardiac into the pyloric portion of the stomach. Since those cases with the kinked lesser curvature showed the most marked symptoms of retention, Pancoast advances this as a mechanical cause of impaired motility in gastropptosis.

Having outlined the greater and lesser curvature we come to the estimation of the size of the stomach, and here we are on uncertain grounds. For the stomach is a contractile organ and changes its shape and size from time to time, depending upon the amount of food it contains, and upon its peristaltic activity.

However, in spite of the fact that different observers have introduced into the stomach varying quantities of food and of varying consistence, the apparent size of the normal or symptomless stomach has shown no such great variations, but has remained within certain limits. Furthermore, practically all of the cases in which the distance between the greater and lesser curvature was increased, have exhibited symptoms of impaired gastric motility.

In the diagnosis of conditions other than change in position and size of the stomach the X-ray plays a more limited role. Soft tumors of the stomach are invisible to the X-ray, and can give evidence of their presence in but one of two ways. The tumor must either offer an obstruction to the passage of the food, or it must change the gross contour of the organ. If there exists obstruction the X-ray motility test may show retention while the dilatation which may come on later may likewise be recognized.

To produce gross changes in the contour of the organ the tumor must lie in the greater or lesser curvatures, or at the pylorus, to distort the stomach silhouette.

Aside from the use of the ray in carcinoma ventriculi, valuable information may sometimes be obtained as to whether or not a palpable abdominal tumor is connected with the stomach by outlining the tumor upon the abdominal wall by palpation or percussion and then noting the relation of the bismuth-filled stomach to this tumor. The relation of the stomach to a point of abdominal tenderness may be ascertained in the same way.

As to the clinical application of the X-ray's findings, there is some variance of opinion. A closely correlated clinical study is necessary in order to arrive at a definite conclusion regarding any given case. In a review of the literature I was struck by the neglect of some observers to go into the clinical features of their cases more thoroughly, especially with regard to the passage of the stomach tube to determine the motor efficiency of the organ.

It goes without saying that to place a patient who has no stomach symptoms before the X-ray and tell him that he has a ptosed or an enlarged stomach would be absurd.

Without entering into the question as to whether ptosis is a symptom or a disease, it is doubtful whether we can call a stomach whose lower pole extends well below the umbilicus and whose dimensions are apparently increased, a normal organ, even though the patient may not complain of stomach symptoms. Pancoast and Pfahler found that many patients with gastropptosis re-

vealed upon closer inquiry gastric symptoms of a mild type, and great relief is often afforded by the simple application of a bandage lifting the viscera.

Ptois and enlargement can occur only by stretching and an impairment of the tonus of the musculature. Such a stomach may empty itself within the required time, but it may be working under stress. Although doing its work it may be potentially weak with a lack of reserve force. We would certainly not consider an enlarged heart or a displaced heart normal, although for the time being it may be doing its work. Its reserve force is diminished and broken compensation may come on under slight provocation.

A large pendulous stomach unless it be a case of megalogastria, which must be uncommon, is certainly not normal, without reference to what the clinical features of the case may be. And similarly while some internists hold that the position of the lower pole of the stomach *per se* is of no clinical value yet, it seems to me, that such mechanical features of gastric function as position and shape cannot be entirely overlooked.

In conclusion it should be remembered that as yet the X-ray examination of the stomach is largely anatomical and much clinical data must still be gathered in order to interpret correctly and put to practical use the information which it affords.

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DISCUSSION.

J. D. Dunham, Columbus: I have been greatly interested in the remarks of Dr. Lange in regard to the X-ray examination of the stomach and colon. I am glad to find that he takes the position that the mere anatomical study of the stomach does not indicate as to whether or not it is normal. I think we must arrive at a definition of a normal organ. Certainly, with reference to the stomach, a normal organ is one which performs its functions adequately, whether it be large or small, or whatever its shape may be as shown by the X-ray. I think we are apt to be misled by the brilliant results in this line. Personally I have not been able to see the advantage of an X-

ray examination over the ordinary method of diagnosis such as is obtained by careful clinical examination with test meals to ascertain the efficiency of the gastric muscle.

M. J. Lichty: I do not mean to discourage the use of the X-ray diagnosis; neither do I mean to deny that the work being done is accurate; but at the same time I wish to state that I believe that for a physician who handles a great many of these cases the work is not still quite so practical as we would like it. I would ask whether in a good many of these stomachs an examination was made by an exploratory incision, and will mention a case I saw two weeks ago that tallies with my experience of a great many stomachs. Before referring to that case, however, I would say that I believe that clinical methods, such as the test meal with a large amount of fluid, and the expansion of the stomach with air, will give us as good an estimate of the size and position of the stomach as the bismuth test. The question is whether the bismuth test itself may not be as misleading as the test meal is at times. Again, we can expand the colon with air and get its position very nicely.

About two weeks ago I saw a patient with stricture of the pylorus. He had hyperacidity. An operation was advised at once. That evening in the hospital I found that the stomach lay in about that position. (Illustrating on blackboard.) I had the patient drink a couple of glasses of water. We decided to wash out the stomach and get the patient ready for an operation next morning. My surgeon told me he thought the stomach came down in this position. (Illustrating on blackboard.) We inserted a tube and got out two glasses of water, and then to my surprise we removed six quarts of material which we collected in a basin,—a good deal was taken off my clothes afterward,—fully six quarts of fluid.

We washed the stomach very carefully that evening and again at 4 o'clock in the morning, prior to the operation. At 9 o'clock in the morning, when the surgeon came to the hospital to perform the operation, we found the stomach up very nearly in normal position. The amount of fluid that was crowded down into the lower portion of that stomach which the patient ate Thursday night, after we washed his stomach first, and on Friday morning trying to get up a little steam for the operation, had all conglomerated in the bottom of the stomach. One could almost imagine it was laminated there. That amount of food in there simply deceived you, and why could not the bismuth? I am frank to say that I saw that stomach the next morning, and I know it was in position. After the stomach was washed Friday night we expanded it with air and we had a kind of balloon-like condition in the stomach. The center of the stomach was about at the umbilicus.

Now if the food crowded into the stomach could mislead one, why could not the bismuth mislead one? Certainly no one will doubt that we saw the stomach very accurately in position the next morning. The surgeon was not obliged to pull up the omentum and transverse colon, lower curvature, to find it. It lay well up beneath the diaphragm. In another case which I have seen recently where an X-ray examination was made with bismuth the stomach lay in this position. (Il-

lustrating on blackboard.) After expanding the stomach and bowel with air I could very well see a tumor of the kidney lying well up within the left hypochondriac region. I do not mean to say that the bismuth test by X-ray has no value, but in a great number of cases I wonder whether such X-ray examinations are necessary, or practical.

H. K. Dunham, of Cincinnati: Mr. President, I wish to express my appreciation of the work that Dr. Lange has done along this line of X-ray examination of the stomach. (The speaker here re-exhibits several charts of Dr. Lange's, showing shape and position of the stomach as taught in the text-books, and as ascertained in the living subject by X-ray examination.) These are the main types of the so-called normal stomach as it comes out in the light of an X-ray examination. I think nothing can be more striking than the comparison of the text-book type which the doctor has drawn on one of his charts with the other types as we see them with the X-ray. These diagrams are in no way exaggerated. The reason why this idea of the stomach has been put forth in the text-book is because the stomach which we see at autopsy is nearly always a contracted stomach. The last speaker very ably called your attention to the difference in the stomach before or after lavage preparatory to an operation. We know that the stomach will contract, and we know that it will go back into place when it is empty. Thus we explain the speaker's dilemma. What we want to know is what happens when the stomach is full and distended and is trying to functuate, and that is a big subject. A large distended stomach is a very useless organ; we are trying to find out just how useless it is. This is a subject, as Dr. Lange has said to you before, which is not finished. The book is not closed. Just the first chapter has been written. The normal stomach itself has not been undisputedly ascertained. We cannot come to you with plates and charts, and say this is the normal stomach, but when the pylorus is below the third lumbar it is abnormal. As to how much is disease, or how much is normal, there is still a large degree of latitude.

Yet some cases we can say are clearly normal, and some others are clearly abnormal.

Now the point I wish to call your attention to is the importance of mapping out of the stomach by the ordinary methods of physical examination. Do not lose sight of one of them. A bismuth examination alone is not enough. You wish to have the stomach distended as much as you possibly can; and to do this we use a full meal with bismuth, as well as tartaric acid and soda. Do not forget that you must take into consideration all of the physical signs; but if you have not a very clear idea of the location of the stomach you will be misled by the colon coming around and underneath the stomach and running high up to the splenic flexure. This will also give you a tympanitic note. If the colon is distended below you will probably not know exactly where the colon begins and stomach ends. After you have seen these stomachs examined by X-ray you will not be so cocky about saying what is the normal stomach and what is the position of the stomach in your case. As Dr. Lange has said to you upon this floor, do not let us lose sight of the older and

more proven methods of examination; but I want to say to you also, do not lose sight of the fact that you are not going to know where the stomach lies unless you have examined at least a few cases by the Roentgen method. It has been shown that in carcinoma the bismuth will often appear not in a solid mass at the caudal pole, but is seen cut up into small portions in such a way as to enable us to almost positively tell you that there is a tumor of some sort, either in the pyloric end, or in the lumen of that stomach. We can make such a diagnosis sometimes, but often we cannot tell as much as we should like. You can tell the X-ray expert a great deal that he would like to know, but you should also listen to him as to an X-ray examination of the stomach, to verify your older methods.

W. E. Shaw, Cincinnati: I would like to ask Dr. Lange in his summing up to give us a little information in regard to the bismuth poisoning to which he referred in his paper. I know nothing about it; but it seems to be a pretty well demonstrated fact that in nature bismuth and arsenic are pretty closely associated. Some years ago we had a practitioner in town who demonstrated the association of arsenic very frequently with bismuth; and he became a little cranky along that line, and in writing his prescriptions for bismuth he always specified, not to use the bismuth of one of the most noted firms in the country, because he had so often found arsenic present in their bismuth. I would ask Dr. Lange if he has noticed whether the poison referred to was arsenical in character, or not?

Chairman Hoover: If there is no further discussion of Dr. Lange's paper we will ask him to close.

Sidney Lange, Cincinnati: I have little further to add. I believe a conservative attitude is the proper one. I have simply presented facts and not attempted to draw any conclusions as yet. These pictures are what we see when we distend the stomach with an ordinary meal, mixed with a bismuth salt. We must closely correlate the X-ray picture with the clinical findings, but I do not attempt to set down any conclusion that can be incorporated in a text-book as worthy of being taught to students.

In regard to bismuth poisoning, I know nothing about it, because I never had a case of it in my experience. I suppose I have been very fortunate. I believe from what I can gather that the early cases of bismuth poisoning have been due to contamination with arsenic; but I believe we can now get bismuth free from arsenic. So that possibility can be put aside. Cases of poisoning have occurred from the presence of the sub-nitrate radical. I hesitate to give the sub-nitrate to children under twelve years, because there are certain conditions in the small intestine of children of that age that rapidly break down the sub-nitrate and produce nitrite compounds; and there have been untoward effects as the result of nitrite poisoning. I am now using bismuth sub-carbonate and bismuth oxycarbonate.

In regard to poisoning by the bismuth radical, I do not know anything about that; it has never occurred in any of my cases.

SOME OF THE REMOTE EFFECTS OF SHOCK AND CONCUSSION.

BY FRANK WARNER, M. D.,
Columbus.

[Read before the Ohio State Medical Association.]

The immediate effects of shock and concussion usually unmistakably and clearly declare themselves. Not so, however, with some of the remoter effects. It is here that the best skill of the physician is demanded to settle clearly in his mind whether a surgical condition exists, or a neurotic disturbance as a result of the injury, or a psychosis, or what I fear is a very frequent thing, is a simulation of some nerve trouble when damages are a possible factor in the case.

It is far more difficult to unravel the true condition in some of these latter cases than it is when a real trouble exists, and that without the possibility of damages. In making an examination it is always very important for the physician to know at the outstart whether damages are a possible factor in the case. If they are, this whole question should be approached with the greatest care. While giving proper credence to the statements of the patient, one must ever be alert to misstatements or gross exaggerations. On the contrary these cases of nerve disturbances following injuries should not be approached unsympathetically as if no neurotic disturbances ever followed an injury, for the contrary has been too clearly shown. In all parts of the world these neuroses have followed their similar lines, appearing in many who were too ignorant possibly to have known what symptoms had appeared in other cases.

Until recent years a general doubt existed in the mind of the profession as to the existence of traumatic neuroses. If a neurosis existed it was looked upon as a coincidence rather than a result of the injury. But it has been clearly shown that neuroses and psychoses may follow shock and concussion. It had been a matter of common knowledge previously that many grave organic affections follow injuries without known lesion.

If a question of damages is or will be possibly a factor in the case, and the physician has settled satisfactorily in his mind that a real pathological condition exists in the nervous system of the patient, he should next settle its degree and the probable cause of that disturbance by a careful and judicial weighing of all facts bearing upon the case. Simply because a neurosis, a psychosis, a myelitis, an inflammatory condition

of some nerve, or a tumor or abscess has formed in the brain following an injury, one must not assume too quickly that it has resulted from an injury because it followed it. I think one is prone to analyze less accurately the causes of these disturbances when he is called upon simply to determine whether these conditions exist as a result of an injury, where the injured party hopes to secure damages than when one examines them with reference to treatment alone, where damages are no possible factor in the case, for here the treatment employed is selected according to the cause of the disease. In all fairness to the patient and to the responsible party who caused the injury, each cause of these various disturbances should be carefully reviewed.

Another point that seems important to consider when one encounters a neurosis or psychosis, or an inflammatory or degenerative lesion of the nervous system, or brain tumor or brain abscess, is whether these pathological lesions have really followed the injury instead of having preceded it. The temptation is very strong for some persons who have been in an accident and are suffering from a pathological condition of the nervous system to conceal the fact that the disease was in existence previous to the accident.

Where one has received slight or severe injuries from which he was thought to have recovered, but now alleges a revival or accentuation of symptoms existing at the start, or the development of some new pathological condition connected with the nervous system, it is not always an easy task to know whether that individual is a malingerer or is magnifying his troubles, where a real disease of the nervous system has followed the injury. The investigation of such a case taxes not alone the skill and ingenuity of the examiner, but exacts the greatest patience in developing the history of the individual in all relations bearing upon the case. In some of these cases an examination will not reveal what a well developed history will do. But it is surprising how ingenious some persons are in simulating an involvement of the nervous system.

If neurasthenia is the type of neurosis alleged to have followed an injury, how important is the carefully developed history of its symptoms coupled with the results of the physical examination. Has the patient detailed a true picture of the disease as it ordinarily appears? Has he been reasonably consistent from day to day in describing his symptoms? Has the physical examination tallied with the symptoms? In the case of the ordinary layman it should be a very difficult matter long to deceive an intelligent and careful physician. That he is deceived frequently

in these cases is best evidenced by observing the immediate throwing off of all semblance of a neurotic disturbance by many who have secured damages after a trial in the courts. Some physicians allege these are prompt recoveries following the settlement of damages. That the symptoms had been perpetuated by the worry and anxiety attending the trial. I should be quite willing to believe this had I not seen from time to time some alleged degenerated and atrophied nerve, with its associated palsy, make as sudden recovery following the successful termination of the suit for damages. I have prominently in mind one case of an alleged paralytic, who successfully deceived a number of neurologists, surgeons and internists through three trials with large verdicts, and a final compromise by the company, which was defendant, paying over a large sum of money. Immediately following his having received the money involved in the settlement he threw away his crutches and walked away. It is true in this case there was an equal array of physicians of the other side, who thought they saw sufficient evidence to convince themselves that the condition was simulated.

It has seemed to me if the physicians of the opposing sides could examine the patient together and point out to one another the results of their findings that there would be less likelihood of such a variation of opinion. Of course it would be the policy and interest of the opposing counsel to prevent this.

Why is this great divergence of opinion among physicians in cases of alleged affections of the nervous system following injuries? Notice any case on trial where such a question is involved. It is true the difference of opinion between physicians of the two sides is not always as great as the attorneys who have called the physicians would have the jury believe. But still the differences of opinion as to the existence of a real pathologic condition are great even where we should expect them to be in accord. I have been acquainted with a number of cases in which it seemed to me the real difficulty lay in an insufficient study of the case. Physicians are frequently, indeed generally, asked to make the examination and consequent conclusion at one consultation. This seems to me more hasty than you would be in your private practice, and that it allows less time and opportunity than these cases warrant. A fuller study of the case would make less disagreements among physicians. This is true not only when it is a question of a real pathological condition of the nervous system at issue, but more especially when it is a functional disturbance alleged. In both of this class of

cases greater attention given to a full development of the history of the symptoms would enable one to examine the patient more intelligently and the results would certainly be improved, as would be seen in less disagreements of opinion between the physicians of the two sides of the contest.

Each surgical condition presents its own symptoms immediately or in a very short time following the accident. But I am more particularly concerned in the present paper in dealing with abnormal conditions that may later arise in the nervous system following injuries in which there has not been any gross lesion, such as a fracture making compression upon the brain or cord, and no serious hemorrhage into the central nervous system, nor severing of a nerve by the ragged edge of a fractured bone. These are sufficiently manifest in the symptoms they immediately produce. But even when there are none of these gross lesions, shock and concussion, in addition to their own immediate and usual history, produce occasionally neurotic and psychotic disturbances of a more or less permanent character as well as inflammatory and degenerative lesions of the cord or brain. Tumors of the brain and abscess of this organ are occasional late manifestations of falls and blows.

Of the traumatic neuroses the most frequent and perplexing one is neurasthenia, or a psychoneurasthenia. This may begin immediately following the injury, but frequently weeks or months elapse before the inception of this manifestation. The neurosis usually takes the form of a severe neurasthenia, which is not lightly recovered from. Starr takes the position that this form of neurosis may be of a more or less permanent character. Unless the patient was of a psycho-neurotic temperament to start on, Starr's position has seemed to me rather untenable.

As neuroses are so frequently alleged as a result of injuries due to one cause or another, and damages are demanded, it behooves the diagnostician to exercise more than ordinary care in the examination of the patient. In obtaining the history of the symptoms one should try and get the patient to unfold the different stages of the disease without asking leading questions so as to avoid suggestion. It may not be sufficient to form an accurate opinion as to the existence of a traumatic neurosis by a single examination. It would seem that carefully repeated examinations should be sufficient to make a definite diagnosis. Although we should remember the admonition of Freund, that it is a difficult and tedious procedure to detect the difference between a neurosis and simulation. Having shown that a neurosis exists, it is not a simple matter by any means to deter-

mine its degree when the patient willfully exaggerates the symptoms.

In traumatic neuroses, vasomotor disturbances are generally present. Oppenheim calls attention to cyanotic discolorations over limited areas in which a name may be written with the finger, several minutes elapsing before the name fades. I have had a recent case of this character in my own practice. Pains in this cyanotic area and a restraint of the motility of the muscles in this situation were prominent symptoms as they are in the most of the cases of traumatic neuroses.

While the form of neurosis following some cases of shock and concussion may take the form of neurasthenia, it is frequently of a more complex type, taking the character of a psychosis as well as a neurosis. Hysteria may be a prominent factor associated with neurasthenia. It may take the form of epilepsy or of localized spasms.

It is unquestionably true that mere excitement and fear may constitute the psychic shock which is sufficient to produce traumatic neuroses.

Paralytic conditions of one sort or another sometimes follow later shock and concussion. This may take the form of a paraplegia or more frequently a hemiplegia. Charcot regarded these as being of an hysterical type.

Pains, paresthesias, hyperesthesia and vasomotor disturbances are frequent concomitants of these traumatic neuroses.

Psychic shock attending an accident, resulting in producing a leaping, bounding and throbbing heart action, with its consequent arterial tension, may occasionally stand as the immediate exciting cause of apoplexy of the hemorrhage type. Of course we must grant in these cases diseased walls of the arterial coats as the predisposing cause. But the sudden strain has caused a brain artery to yield to the increased tension thrust upon it. If apoplexy follows surgical shock, its form will more than likely prove to be of the thrombotic type; the thrombus having had favorable opportunity to develop during the time of the weakened tension and slowed blood current.

It has been common observation that brain tumors occasionally follow comparatively light blows upon the head, even when there was no appreciable lesion beyond the shock and concussion incident to the blow received. Only a small per cent, however, of tumors of the brain which occur from all causes, says Starr, result from injuries.

Whenever a sufficient number of symptoms have arisen to justify the diagnosis of a tumor of the brain, it is important to remember, before ascribing it to be the result of a blow or fall, that the most frequent tumor in this situation is one

of a tuberculous character. While it may be primary in an occasional case, it is generally secondary. If one finds in addition to the tumor of the brain, evidences of tuberculosis elsewhere, the fair presumption is that the tumor is a secondary one and in no wise connected with the injury.

Second in frequency to those of a tuberculous character, are sarcomatous tumors, which are rarely secondary to sarcomatous growths elsewhere. They occasionally result from blows or falls, just as gliomatous tumors of this situation, the third in frequency of tumors of the brain, may develop from a like cause.

An abscess of the brain occasionally results from such injuries as we have under discussion. Dana says that 50 per cent of all brain abscesses result from injuries, but of course many of these injuries are associated with gross lesions of the skull and perhaps scalp. If a considerable interval has elapsed since the injury and the patient has given evidence of partial recovery, we should not be misled from a possible diagnosis of brain abscess. For in this condition there may be intervals of apparent freedom from brain symptoms, later showing themselves mildly or violently.

Few authors include locomotor ataxia as a result of shock or concussion, but Starr says that falls or blows upon the back, buttocks or feet are causes of the disease. Some authors state specifically that they have never encountered a case of locomotor ataxia in which they felt that it could be clearly attributed to an injury as its cause.

Myelitis occasionally results from injuries that show no gross lesion. While giving falls and blows their proper causative influence, it is well to remember the words of Gowers that this disease is usually the result of syphilis. So, in making a physical examination of a case of myelitis, one should make a most thorough search for any evidence of that person having suffered from syphilis. Church and Peterson give concussion as one of the causes of myelitis, but think that minute hemorrhages into the cord may have started the process.

Epilepsy occasionally appears in an individual after either shock or concussion.

Other forms of neuroses and psychoses as well as organic disturbances than have been touched upon in this paper may follow injuries in which no lesion has taken place beyond such unknown ones as occur in shock and concussion.

When we pause to think of the innumerable results of such injuries, it admonishes us that great care needs to be exercised in attempting to definitely define at once the remote results of injuries which have nothing tangible about them but

shock and concussion, and that when they arise the diagnosis of these conditions demand our best efforts and closest attention.

DISCUSSION.

Dr. House: This paper of Dr. Warner's is of more than ordinary interest. While I am not a neurologist, yet I am interested in this class of cases, being connected with a small institution, which is situated in a district where over 10,000 employes in shops are injured more or less each year, and through this we come into contact with a large number of injuries, and especially of the spine and brain. Perhaps this subject can be more intelligently discussed by the neurologist than the surgeon. Undoubtedly in a great many of these cases no organic changes can be found, and yet they really believe they are injured. I believe in some cases that the patients mean to leave the impression that they are malingerers. I believe in some of these cases the psychical impression is such a character that the patient believes he is injured, and the longer he goes under this impression, the more he believes it. A short time ago I saw a patient here with a neurologist in Cleveland, who had fallen in an elevator. She wasn't severely injured. There were no external abrasions or contusions. She was not knocked down, but simply stood upon her feet, and as the elevator came down it gave a jar. She laid off six weeks after the injury, finally went to work for two years, and then being taken to a hospital, the surgeon removed an appendix and ovary, and then she thought she had some spinal trouble, and in going over her history it was extremely difficult to satisfy one that she was not severely injured, yet upon a close physical examination the reflexes proved to be normal. Yet I believe that this woman really believes that she suffered an injury from the shock received in the fall of that elevator. There is no question that the majority of these cases are malingerers, and that many of them are cured the very moment they receive a recompense or a certain amount of money for their injury. There are others that I really do believe feel that they are seriously injured, that it is not put on, yet upon examination we find no lesions, the reflexes are normal, but this impression upon the mind seems to be so perfect that the patient makes us believe that he is really injured.

Dr. Warner, Columbus (closing): As Dr. House says, the neurologist can deal better than the surgeon with many of these injuries. That is true in many cases, yet it seems to me that every surgeon should want to satisfy himself as to the probable result of these injuries, so far as they relate to his own cases. I have no objection to calling in a neurologist to my aid, but simply to accept his word for all the results I think is going too far. Then there are other conditions arising in this class of cases that I think are quite as much within the surgeon's province to diagnose as the neurologists, and that is, many of these organic disturbances, such as brain tumor or brain abscess. It has seemed to me that inasmuch as a sarcoma occasionally occurs elsewhere from an injury, it is only reasonable to assume that an injury is a possible causative factor in its production in the brain.

THE PROFESSIONAL ANESTHETIST.

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[Read before the Ohio State Medical Association.]

The present age of medical and surgical specialism still finds unclaimed, at least in the United States, the important field of the anesthetist.

Yet there is probably no branch of medicine or surgery where art is more manifest or where a more definite knowledge of the patient's exact status is required than during the administration of an anesthetic. And there is probably no time where a patient places his life more fully in the hands of a physician than when taking an anesthetic.

Since there are few, if any, real positive signs of danger until danger is almost, if not already, present it requires every faculty to interpret rapidly and to know when the complex combination of life plus anesthesia is a harmonious one.

It is not the pupils, pulse, respiration, color or general appearance considered alone or in combination that furnishes positive knowledge of safety; it is all these and one other very important factor, namely, the personal equation of the anesthetist, which is accurate observation, long experience and that sixth sense, intuition, to know that all is well.

At the present time most medical colleges teach but a theoretical course in anesthesia, forgetting that in actual practice there is no opportunity to leave the case and read it up or to call in a consultant.

The course in major surgery is taught in all its details, yet at the same time its many dangers are pointed out so clearly and emphatically as to fill the recent graduate with enough temerity so he will not attempt a major operation until he has received special training. When the actual truth is considered the recent graduate is as well schooled to perform the major operation as to administer the anesthetic.

In most hospitals the recent graduate, and frequently the senior student, administer the anesthetics without a chief to instruct, guide or control the anesthesia.

To those who are surgeons and to those who are on hospital staffs the frequent harrowing experiences of near calamities are familiar. A physician having the welfare of his patient selects a competent surgeon to perform the operation, frequently when it is only of a minor nature. Yet he will often insist that he be permitted to

administer the anesthetic so as to bear a closer relationship to his patient.

Upon analysis the physician will often find that he has had as much experience in surgery and is probably as competent to perform the operation as to administer the anesthetic.

The professional anesthetist has thus far not been able to establish in the minds of the laity or the profession generally the true value of his services. This is due to the fact that the importance of the anesthetic is not known to the patient and its direct bearing upon the success of the operation fully appreciated by the many who perform occasional surgery.

To the patient the professional anesthetist is of inestimable value for he relieves the surgeon totally of the worries of the anesthetic and permits him to give all his attention to the operation. To the surgeon he gives a feeling of confidence which knows no value. Due to his experience and skill, the professional anesthetist can usually learn the anesthetic characteristics of the patient. Know when it is advisable or necessary to administer hypodermics of strychnine, morphine, scopolamine or atropine. He knows what preliminary anesthetic it is best to administer and what general one should follow. How to avoid the dangers when it becomes necessary to change from one anesthetic to another.

The professional anesthetist will usually administer a lesser amount of anesthetic than the unskilled. He will induce the anesthesia so gradually, that the change is a transitional one, during which time the patient's mind, brain, heart, lungs and circulatory apparatus quietly assume the new state of anesthesia.

The skilled anesthetist should know in what stages of the operation the anesthetic should be deepened and when it may be lessened. He will be able to interpret the early signs of shock and in a way measure the patient's vitality, and by a word now and then he can give the surgeon an accurate invoice of the patient's condition.

By the general recognition of the value of the skilled anesthetist, surgery ought to be advanced, the immediate dangers during an operation lessened, and the remote effects upon a patient's circulatory apparatus and kidneys decreased.

768 Rose Building.

DISCUSSION.

Dr. Goodman, Columbus: If you have noticed, it is the young men who are urging a spread of better methods of teaching anesthesia. The law says that a dentist must call in a physician before administering gas or anesthesia. It does seem a sort of a joke that the man who has just as much

education as any physician who graduates from the medical college today, must call in a physician who knows no more about an anesthetic, to stand there and watch the patient. Some progress has been made since some of the younger men have been preaching this, and I cite the Grant Hospital of Columbus, with which I am connected.

"The board of directors shall have general supervision of the administration of anesthetics and shall be consulted by the anesthetist whenever any radical change is to be made in the character of the anesthetic or the method of administration, and ONLY EXPERTS SHALL BE EMPLOYED."

I will surprise you to know that when the Grant Hospital was enlarged and wished to add two more expert anesthetizers, the staff couldn't find in the whole city of Columbus two men who could say, "I have had such and such experience and am an expert." The above action of the Grant Hospital is a few steps in advance of other hospitals, although a few of them are beginning to see light. The colleges should be willing to take their men into the hospital in section classes, under a competent instructor, and teach them the administration of an anesthetic step by step. They don't do it. The most prominent men in charge of the colleges will tell you that the operation is easy, but that the danger is in the anesthetic. The nose and throat men will call in a student to give an anesthetic for tonsil and adenoid operations. I would much rather be the operator removing the tonsils and adenoids than the man having his tonsils removed. I hope this paper will cause many to discuss this subject as it should be.

Dr. Rufus Hall: I am one who appreciates a trained specialist in surgical work. So far as I know personally, I was the first man in this section to employ the same man to give anesthetics. As early as 1888 I employed a man to give anesthetics in all my operations, and that man continued for about five years in this position. I then employed another man who stayed with me until less than a year ago. I now employ another man who has had a large experience, who gives up his time every morning for this service, and I can assure you it is a source of very great satisfaction in operative work. It adds more than a minor advantage to the majority of the patients in all serious and prolonged operations. A man who is an expert will do better for your patient, will give less of the anesthetic, and therefore it is better for the patient. I appreciate the anesthetist in this work as much as any of the men preceding me. When I operate in emergency, even though the man be a good anesthetist—I operate under disadvantage and under the highest tension, and to greater disadvantage to the patient. I have often thought of the men on the staff of some of our hospitals breaking in new internes, who have had no experience in giving an anesthetic. We can't urge too strongly the necessity of a man who is trained for that specialty, who does it year after year. It adds to the patient's welfare in all prolonged operations.

Dr. House, Cleveland: I think Dr. Hall voices the sentiments of most of us. The great difficulty is that we cannot always have a professional anesthetist. In hospital practice, one should seek to have some one connected with the institution who

would be able to give anesthetics daily. This cannot always be done in changing help. It is impossible in some of our institutions, because they haven't the necessary endowment to keep a professional anesthetist. There are times when the surgeon is obliged to operate upon free patients. In those cases we cannot always expect to have the professional anesthetist, yet I am heartily in favor of the sentiments of the essayist. No one who has not gone through the experience of having the patient die or nearly die can appreciate the benefits of the professional anesthetist. I know of nothing that is so embarrassing, which harasses a man so much in his work as to be obliged to keep his eye constantly upon the anesthetist, to see the condition of his patient. This is certainly a fact in many instances, especially at the end of the college year, when the new internes are taken into the hospital. In the institution with which I am connected we have been endeavoring for several years to keep one man for six months beyond the time of the new internes, in order to educate the other men in giving anesthetics. I know of no other way in hospital work, unless the institution is endowed with sufficient money to pay a salary to a professional.

Dr. Langley, Cincinnati: There is no subject of greater importance, I think, than this one, in which our public institutions and our general hospitals have erred most seriously. While there are some hospitals who have a professional anesthetist, I think the great majority of them do not. We don't have one here. I think it should be urged that every hospital have a man skilled in the administration of an anesthetic, and six months or a year's experience is not sufficient. I think every large hospital ought to have such an officer, and this officer should have a considerable amount of authority concerning the anesthetic that is to be given. I am more and more impressed with the importance of this subject, because in the Cincinnati hospitals the duty of giving an anesthetic usually falls to one of the younger members of the house staff. For the sake of educating our own house staff, we ought to have some one who has the experience ought to have some one who has the reputation and knowledge, and can give a reason for this anesthetic or the other. It has come to the time when we have a variety of agents to select from, and it has come to the time when our patients have the right to demand that some one of large experience shall give the anesthetic. I think the sentiment of the profession ought to compel all hospitals, and particularly all general hospitals, to have an officer of that sort on their staff. I would give him equal authority with the surgeons, obstetricians, medical men, and all. I am rather inclined to think that those of us who have gone along in years are not thoroughly posted in all the newer methods as we should be. We have had a certain amount of success in our own experience and are very prone to accept those agents which have served us well. I am glad to see this subject brought before the State Society. I hope it will not be allowed to drop, but will be a subject that the State Society will take up as urgent and recommend the necessity of state and city hospitals appointing someone with authority on this subject.

Dr. Parker, Dayton: I would like to call attention to plan in vogue in the Miami College at Dayton that I think presents features worth your consideration. I would urgently call attention to the faculties of our various medical schools as to the need of more careful teaching and more extensive training before their young men are graduated in this department of work. The young men sent to us as internes, when it comes to the administration of anesthetics, are painfully incompetent. I don't think that quite fully expresses it. They are almost critically incompetent. The staff of that hospital feels that they need and are entitled to practical training. They also feel even more keenly that their patients need and are entitled to expert anesthetists, therefore we adopted the following plan: Each surgeon on that staff has under his appointment an annual assistant, known as the supervisor of anesthetics. A man whom he knows to be competent and who will undertake seriously to do the work. It is that man's business to supervise the administration of the anesthetic by these young internes. He is expected to decide what anesthetic is to be given and to know the condition of the patient at all times, to watch every respiration and every heart beat just as if he himself were giving the anesthetic. This, of course, requires his presence and close attention; more so, perhaps, than if he himself were giving the anesthetic. His service is continuous with that of the member of the staff he assists—that is, four months in each year, and each surgeon has a different supervisor. This plan accomplishes very much. It gives these men practical training, which they need; it protects the patient; it adds an interesting man to the hospital staff, and is working extremely well.

Dr. S. Iglauer, Cincinnati: It seems to me that the essayist has brought out a very important fact, and that is that a man gives an anesthetic not only through knowledge, but also through (the word which he used) intuition. A good anesthetist seems to follow the state in which his patient is placed. It has always been a wonder to me that the surgeon didn't insist upon such a man. Where the surgeon has an anesthetist in whom he has confidence—he scarcely ever pays attention to the anesthetic—and devotes his time to the operation. That is in the interest of the patient as well as the surgeon.

Another point brought up is the lack of teaching in the colleges on this subject. It has always seemed to me that it would be a very important matter to allow students to anesthetize animals, and not only anesthetize them and allow them to recover, but also allow them to die. In that way they would realize the potency of the drugs with which they are dealing. In most hospitals it is customary to allow the new interne to give the anesthetic. In my judgment the man should give anesthetics just before he leaves the hospital. He should first witness a great number of anesthetics. In order to educate the public up to the importance of the trained anesthetist, the physician must do his duty. Occasionally, the patient is more advanced in this respect than the surgeon himself. I know of one instance in this city where a patient insisted on bringing the anesthetist from

Chicago, because she didn't trust any anesthetist in Cincinnati. When we get patients in that state of mind there will be no trouble about dignifying the position of the trained anesthetist.

Another point, as brought out by Dr. Langley, there are so many methods of giving anesthetics that one is embarrassed about making a choice, and the average man is not in position to make use of this choice. It is only the trained anesthetist who can make a wise selection. Most surgeons forbid the anesthetist to watch the operation, but I think if he knows what is going on he can increase or diminish the flow according to the condition of the patient.

Dr. Cusher: Like the younger men of the profession, I feel anesthesia is one of the most important things we can teach at the beginning of surgery. By doing so I believe we will save a great many lives, especially by these men who enter practice without a hospital education. I heartily endorse particularly Dr. Goodman's suggestion as to forming a chair of anesthesia in the hospitals.

Dr. Halderman, Portsmouth: I feel that there is no subject in practice so little understood, not only by the beginner, but the old practitioner. My experience has been that the young men who have recently come from college are, in most cases, better qualified to give an anesthetic than many men who have practiced medicine for several years. There are men who are good physicians and good surgeons who are poor anesthetists. I would be afraid, and you would be afraid to have them administer an anesthetic while you were operating. What are you going to do with these men? The whole thing resolves itself into this. Let us not consider it so lightly. We have always considered the subject too lightly. Even in the giving of ether, which is considered by all of us the safest, and by chloroform, that deadly drug—we need only to have one or two experiences—I never saw a death in our community, but it has come so devilish near to it that I never want to see it again. After all, we want to consider this matter in the light in which it belongs—that it is one of the grave operations. It is one of the major operations, and we want to set about and instruct the younger men.

THE PRACTICAL TREATMENT OF HEMORRHOIDS.

WELLS TEACHNOR, M. D.,
Columbus, Ohio.

[Read before the Ohio State Medical Association.]

The inestimable number of medicinal and surgical measures which have been suggested for the relief and cure of hemorrhoids are evidence of the fact that the successful alleviation of this common malady is no easy task. While the modern and rational treatment began about fifty years ago—with the use of the cautery and ligature, we find for countless generations that the treatment

of hemorrhoids had exercised the genius of medical men.

From the earliest antiquity medical history is interspersed with passages relating to the cause and cure of hemorrhoids. The malady has a Biblical history, and there are many traditional evidences that the disease existed, and that it was recognized as early as the time of Moses.

While much can be done to give temporary relief in a palliative way, all writers, both ancient and modern, have rightly placed the treatment in the category of surgical diseases.

Many surgical procedures have been devised for the relief of hemorrhoids, some of them simple, others complicated and elaborate. In this connection it is only necessary to say that the *many operations* vary simply in technique, and that each was devised for the purpose of accomplishing the same end, namely, the destruction of the hemorrhoidal plexus, which is the key to the radical cure of the disease.

The ligature or some modification in technique is the oldest and the operation generally used. The excision and suture operation, which I consider only a modification of the ligature technique, and the injection methods, are plans that meet demands for the successful alleviation of the disease, and insures a more comfortable convalescence than that which follows the other procedures. I have used these operations to the exclusion of all others during the past five years, and have found them not only satisfactory, but followed by fewer unpleasant symptoms and sequelæ than the other methods which I have tried and discarded.

It is a deplorable fact that the majority of rectal diseases are treated by those who advertise, because their methods are pleasing to the patients. Unfortunately this is too often sanctioned by regular physicians, or aided by their dilatory tactics in the management of these cases. The general practitioner treats them with little concern by following his usual custom of *first giving, and then repeating*, stereotyped prescription calling for a "pile" salve or "cones," until the patient becomes disgusted with the results of the treatment, and finally seeks relief by answering one of the many newspaper advertisements. The general surgeon is allured to more spectacular and remunerative fields, and attaches little importance to so trivial an operation as that for hemorrhoids. He gives them the benefit of one of the routine methods, without consideration as to the ultimate result or subsequent comfort of the patient.

The removal of hemorrhoids is not often an emergency operation, nor is it an operation de-

manded as a life-saving procedure. Therefore, the operation of election should be the one that will insure the patient the least post-operative discomfort; the shortest detention from business pursuits, and, at the same time, offering the least hazard to the individual's life and a short period of convalescence. Many of these patients bear the inconvenience and discomforts throughout life rather than imperil their lives by taking an anæsthetic.

So many things enter into the details of the cutting operations, that the inability to carry out any one of them may mean a failure in the desired result, and great discomfort to the patient.

Every operation should be proceeded by a thorough rectal exploration to the satisfaction that no other serious pathology exists. During the operation every spurting blood vessel should be securely ligated. The raw surfaces in the rectum, *made by dissecting the tumor from its base*, should be covered with mucous membrane, leaving intact as much of the normal mucous membrane as possible to prevent subsequent contraction. This operation is always satisfactory, and can be done under sterile water or weak eucaine infiltration, unless the hemorrhoids are complicated by a serious ulceration, or are associated with a rectal affection demanding a more radical treatment.

PREPARATION OF THE PATIENT AND THE OPERATION.

The bowels should be carefully prepared by giving a saline laxative twelve hours before the operation. The night before the operation a perineal and anal bichloride pad is applied and retained during the night. Two hours previous to the operation an enema is given, the parts washed and the dressing reapplied.

After the patient is anæsthetized, the sphincter is thoroughly divulsed, and the rectum cleansed. After this the external parts and the hemorrhoidal mass is made surgically clean. With the patient in the lithotomy position, the hemorrhoid selected to be removed first is seized with a small pair of forceps and made tense. Then with a pair of scissors it is rapidly dissected from its bed, beginning at the muco-cutaneous junction, and continuing until the pile is distinctly pedunculated. Bleeding is insignificant up to this time, because the chief arterial supply is at the upper border of the pile, *and in the pedicle*. In the next step of the operation, the pile is drawn down, and the first suture of catgut or fine silk is passed under, including the pedicle, and is tied, leaving the needle in the long end of the suture. The extraneous mass is now cut off, and the mucous membrane on either side of the raw surface is picked up and sutured down to the muco-cutaneous junction. This usually requires from two

to five stitches according to the size of the pile. The remaining tumors are each in turn treated in a similar manner until all are removed, always leaving a strip of healthy mucous membrane between.

The after treatment amounts to very little. The rectum is *not packed*, and the pain is insignificant if the sutures are not drawn too tight or include too much tissue. Retention of urine rarely occurs following this technique. A wedged-shaped gauze pad is placed over the anus, and over this a T-bandage is applied. The bowels are evacuated on the third day, and the patient is permitted to get up on the fourth or fifth.

External hemorrhoids should never be treated in any way other than by local anæsthesia. The thrombotic variety so often encountered should be incised as a boil, after injecting a few drops of a 1 percent solution of eucaine into the lax tissue under the m. After the clot is expressed, the incision should be closed with a catgut suture to prevent a refilling of the cavity. Cutaneous tags that become inflamed should be excised under eucaine, and the edges of the wound drawn together with one or two sutures of fine catgut.

THE INJECTION METHOD.

The method of injection that I am about to detail is one that has always been looked upon by the conscientious physician and surgeon with much distrust, because it has been the method of choice of the ignorant and irresponsible. It is quite unfair to compare this method as practiced by conscientious men, with the disastrous results of this method obtained in the practice of irresponsible men.

Those of us who are in active competition with physicians who practice this method exclusively are compelled to accept the merits of the method and reduce its practice to a scientific principle.

I want to state positively that the injection method of treatment is not applicable to all cases of hemorrhoids. *External hemorrhoids should never be injected*. The practice should be limited to those cases which protrude with each movement of the bowels, or upon the least exertion of any kind, and which collapse when returned above the sphincter, regardless of size. This defines the class of cases to which I believe this method is adapted. The cases complicated by fissure, spasmodic sphincter, or when in a state of active inflammation, should never be injected, otherwise the treatment is not painful and gives almost instant relief, without detention from business, and the tumors disappear as if by magic.

Almost every drug of an astringent or escharotic nature has been used for the injections. The

solutions being quite as numerous as the operative procedures suggested for the radical relief of the disease. *Carbolic acid* is the active ingredient in all the solutions used at the present time. I have never used it stronger than 25 percent in sterile glycerine. A few drops of this solution is sufficient to produce an inflammatory induration of the mass, and diminish or block the circulation, but does not cauterize enough to produce a slough that the stronger solutions are almost sure to do. The patient will then experience quite a good deal of pain, and is subject to such complications as embolism, abscess or even septicaemia. A solution weaker than what I have designated will not retard the circulation sufficiently to cause atrophy and the disappearance of the tumor. I have used this method with such impunity that I believe the serious dangers just mentioned are quite chimerical.

The operation should be preceded by the same preliminary preparation as for other hemorrhoidal operations. The bowels should be freely opened, twenty-four hours previous, with a saline laxative. I do not, as a rule, give an enema previous to the operation, unless there is some difficulty in bringing the mass outside the anus. In such a case an enema containing a small amount of glycerine is given, and the patient instructed to strain them out during its expulsion, and to let them remain so until the time of the operation. With the patient in the exaggerated Sims' position, the mass is thoroughly scrubbed with sterile gauze sponges, and a bichloride solution, 1 to 3000, and the field surrounding the anus with a brush and the tincture of green soap.

The tumor to be injected is made tense by an assistant pulling down or upward, as the location may be, with his fingers at the anal margin. Having an ordinary hypodermic syringe with a No. 22 needle filled with the injecting fluid, it is plunged into the center of the tumor, taking care not to puncture the upper wall, permitting the fluid to be deposited in the cavity of the gut. This can be ascertained by placing the index finger in the bowel. The injection is now made while the needle is being slowly withdrawn. If they are large the fluid may be deposited at different angles, permitting it to permeate the entire mass. It should take fully two minutes to inject the larger tumors. For any excess of fluid that may escape after the withdrawal of the needle, it may be neutralized by applying cotton soaked in alcohol. If there is much bleeding from the puncture, and often there is enough to be noticed by the patient, a piece of cotton soaked in Monsell's solution is applied and allowed to remain for a few minutes. The piles treated are now anointed

with vaseline and returned above the sphincter muscle. The patient is permitted to lie down for a short time, being instructed to avoid over-exertion for the first twenty-four hours, and to replace the "tumors" should they protrude through the sphincter. After this the ordinary avocation may be resumed, unless it be extremely hard labor. Examination at the end of this period shows the tumor to be a solid globular mass, with its attachment to the anal wall distinctly outlined. At this time you find a sero-sanguinous discharge following the examining finger from the anus, emitting a bad odor, which come from a decomposition of the exudation in the tumor, and not from sloughing tissue, as one might imagine. At the end of three or four days they begin to contract, and at the end of ten or twelve days there is a mere vestige of the former mass. This condition is an indication for the repetition of the injection into another tumor. One large or two small tumors may be treated at one sitting, and so continued until all are obliterated.

The after-treatment compared with other operative procedures is practically nil. The patient is instructed to have the bowels move on the third day by taking a saline laxative, or an enema, and is instructed to have a movement every day thereafter.

The operation is not to be looked upon lightly. It requires the same attention to minute details as the other successful rectal operations. If properly carried out it is a method of merit, and one that is applicable to a large number of cases. Finally, it is rational and surgical, and when practiced as detailed, *it is safe and radical*, and as justly entitled to a place in rectal surgery as the use of electricity in cases that *will not or can not* submit to a radical operation.

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DISCUSSION.

Samuel G. Gant, New York, N. Y.: Formerly I resorted to the injection treatment of hemorrhoids quite frequently to avoid the employment of general narcosis, but in the last ten years this procedure has been discarded because I am now able to operate painlessly under local anesthesia upon practically all hemorrhoids and without the dangers which frequently accompany and follow the injection of piles with carbolic acid.

I have personally known two patients to die within the present month, one from general infection and the other from tetanus following the injection of hemorrhoids by quacks in Chicago and New York. During my long experience as a proctologist, I have treated a great many patients suffering from intense pain, sloughing of the rectum, abscess, fistula, pyæmia and many other painful, annoying and dangerous complications caused by the injection of piles with a solution of carbolic acid. This method of treating hemorrhoids

has attracted a great deal of favorable attention because, when successful, the results are accomplished almost like magic and with little discomfort to the patient.

If surgeons and physicians would learn the technique of employing sterile water, eucaine, cocaine, novocaine, etc., by the infiltration method, they would be able to operate upon fissures, ulcers, hemorrhoids, simple fistulae and many other ano-rectal affections without the necessity of giving the patient ether or chloroform or putting them in the hospital, and, in addition, they could put all of the rectal quacks out of business in a short time since the majority of patients go to them to avoid taking a general anesthetic.

Someone referred to the Whitehead operation. This procedure is difficult, requires many instruments and great skill on the operator's part, is often accompanied and followed by hemorrhage; sloughing and retraction of the gut is common, post-operative pain is great, and stricture and other sequelae frequently result from it. For these and other reasons, which I could name, I am convinced that this operation cannot be too severely condemned. I have treated between seventy-five and a hundred strictures which have followed this or Pratt's operation, which is the Whitehead reversed.

Personally, I prefer the *clamp and cautery* and *ligature* operations to all other methods of treating hemorrhoids. The clamp and cautery are employed when general narcosis is used and the ligature when the operation is performed under a local anesthetic. I prefer the ligature when the patient is conscious, not because the clamp and cautery operation cannot be painlessly performed under local anesthesia, but because the sizzling of the cautery frightens him. Formerly individuals operated upon by the ligature operation suffered more frequently from post-operative pain and disturbances of the bladder than following the clamp and cautery method, but such is not the case now. The pain and irritation at the neck of the bladder was formerly caused by the large plated ligatures which were employed, but since I began using a fine soft linen thread for tying off piles, such annoyances have been almost entirely overcome. I have never known a stricture or other serious sequela to follow either of the operations just mentioned. When marked contraction follows these operations, it is because the skin has been unnecessarily burned or too much of the integument has been removed in the operation.

About 80 percent of my rectal work, including fissures, ulcers, hemorrhoids and fistulae, is done quickly and almost painlessly under anesthesia produced by the injection of sterile water or one-eighth of 1 percent eucaine solution.

U. S. Grant Deaton, Toledo: I just want to say that I have never used the injection method myself, but about three weeks ago I was called up about 2 o'clock in the morning and asked to go and see a patient for another physician. I said, "Will you go with me?" It was a case he had injected, but he said he did not think it necessary. I told him I did not like the idea of my going to see his patient with him not there, and he said, "You go and see the patient; I will tell you about it tomorrow." I went. I did not need to ask

him why he did not wish to be there, for there was a mass at the anus nearly as large as my fist, and the patient was suffering intensely. He and his brother were both threatening death, destruction and mutilation of the corpse of that doctor. I protected the doctor, at the same time this has happened three times within the past year.

Now, I presume if the technique was just right this would not occur, but I think it is a bad thing to be used generally, because so many times it goes wrong. Now, I have not known personally of a death from the injection method, and I hope I never will, but I have seen many sad cases which have not recommended the method to me. However, my colleague here may have the technique down so that he can do it successfully, but for myself, if I use the ligature method I feel perfectly safe; I know that there is going to be no hemorrhage, there is going to be no bad after-results. I have never had bad after-results. I used to send most of my patients to the hospital, in fact, at one time I had patients in all the hospitals. Now I have no patients in any of the hospitals. I am doing nearly all my operating in the office and my patients do well.

Wells Teachmor, Columbus (closing): In answer to Dr. Moore's questions: First, I use plain catgut No. 2, for the excision and suture operation for hemorrhoids.

In external hemorrhoids I take a deep stitch, entirely obliterating the cavity, to prevent its subsequent refilling after eversion of the clot.

Fissure complicating internal hemorrhoids never fails to heal after the necessary manipulation of the sphincter during a successful hemorrhoid operation.

I want to thank Dr. Gant, not only for the very free discussion of my paper, but for the subjects of rectal diseases in general. It has all been to the point and very pleasing to me because it emphasizes the fact that at least 90 percent of the work of the proctologist must be done in his office, and by the simplest methods, with the least display of instruments, and with no detention from pleasure or business pursuits. All these conditions can be met by either method I have detailed in my paper, without the dread of the baneful effects of general anesthesia or the discomforts of confinement, either to home or hospital.

In regard to the injection plan, I have tried to make plain that it is not applicable to all cases, only those cases that prolapse on the least exertion or following each movement of the bowels, and collapse again when returned above the sphincter muscle. They must also be free from such complications as fissure or hypertrophied sphincter; under such conditions, if the injection is properly made, they will disappear like magic.

The question of abscess has been raised; I believe the mortality and complications following the injection plan, considering the number so treated, are very small and do not exceed that of other methods, when done in a like careful manner.

The technique that I have given must be as carefully done as when you are going to do any other radical operation. If the fluid is injected in the surrounding tissues or under the tumor you will surely have trouble, as an abscess will

follow. I want to impress this point, that the fluid must be injected directly into the substance of the tumor.

This is not an operation that can be done by any one; it requires preparation—and it seems the profession has neglected or abandoned this field to the advertiser entirely—the same as you have to learn to do local anesthesia; and to do rectal surgery under local anesthesia requires a good training. I do not believe any man can do, successfully, a painless operation under local anesthesia the first time he tries it. It takes a large number of cases and the advantage of a large free clinic to perfect yourself; if you do not, you are liable to have complications and failures, the same as in other lines of work done in a haphazard way.

I want to thank you all for your free discussion. I have nothing further to say but what would be a repetition of my paper.

SOME PHASES OF AUTOMATISM IN EPILEPSY.

WILLIAM H. PRITCHARD, M. D.,
Gallipolis.

[Read before the Ohio State Medical Association.]

The mental characteristics of epileptics have been from time immemorial the subject of considerable interest and speculation. They cannot be otherwise in a disease which, while not primarily a mental disorder, yet presents so many mental phenomena of the utmost medico-legal importance and the entity of which is so ill defined. In a general way the psychic states in epilepsy are separated into two general classes:

First, those obtaining during the inter-paroxysmal periods, the periods during which the individual is measurably free from the direct influence of the factors entering into a fit.

Second, those closely preceding or following a major or minor attack, or, as is generally conceded by authorities, those taking the place of an attack—the so-called psychic equivalents or masked epilepsy. In this class of cases it is assumed that the mental phenomena are dependent upon the factors that cause the somatic disturbance.

In reference to the first class of cases it must be generally conceded that not all epileptics are insane during the inter-paroxysmal intervals. Indeed, through long and useful lives, many epileptics show no mental obliquities whatever excepting the temporary loss of consciousness during their attacks, and, as many such are subject to nocturnal attacks only, even this may not be apparent. The proportion of epileptics to population is estimated to be one to 500, yet only about

one to 2000 become public charges even in such states as Ohio, where the populace has been educated to the desirability of permitting the state to assume the burden of all troublesome dependents. It may safely be assumed that fully half the epileptics in Ohio, who by their conduct or otherwise show that their average mentality is lowered, are not receiving public care, but remain in the custody of their friends. The remainder of those not receiving public care, therefore, constituting fully 50 per cent of all epileptic persons, show no mental twist whatever during the inter-paroxysmal periods, and in many cases the occurrence of the attacks is unknown to even their closest friends. Statistics regarding the mental condition of patients who are not in institutions are of little value. Of those in public institutions for epileptics only from 10 to 15 per cent can be classed as mentally sound, but the proportion is largely increased if those not receiving public care are included.

There can be generally recognized, however, a peculiar temperament which with rare exceptions is common to all epileptics. They are egotistical and self-opinionated; their memory is not of the best or is perverted so that inconsequential details are dwelt upon with wearisome verbosity; they are ill tempered, irritable and suspicious and are possessed of great tenacity of purpose. Many have an abnormal religious fervour which is not in keeping with their daily lives.

In the cases which show mental defect during the inter-paroxysmal periods the most common characteristic is the progressive loss of mental power. When such defect does not appear until after adult age has been reached, it is properly termed epileptic dementia. The course may be and frequently is progressively downward until only the vegetative processes of life remain. When the mental defect is present from infancy or birth, the result is an epileptic idiot, whose actions and appearance, should he live to adult age, may superficially resemble those of the advanced epileptic dement. The term epileptic imbecile is properly applicable to those only whose mental development has been arrested during early or late childhood, and who present the characteristics of an imbecile of high or low degree, to which has been added the phenomena incident to their epileptic seizures. In the patients who enter public institutions, epileptic dementia is the most common mental process observed. In any large body of patients it will be found present in all degrees, from a slight impairment of memory and judgment to the lowest depths of mental depravity. Such patients, together with a considerable number of epileptic idiots and imbeciles,

and a limited number of such as may be termed mentally normal epileptics, constitute the bulk of the inhabitants of any public hospital for the care of the victims of this disorder. The remainder is made up of those who, while they may present in the inter-paroxysmal intervals varying degrees of ordinary epileptic dementia, or may perhaps in those periods present no mental obliquity whatever, yet in connection with their attacks or in place of the ordinary attack, show such characteristic psychic disturbances as to require their segregation as epileptic insane. The active insanity of epilepsy is always associated more or less closely with an attack. It more commonly follows than precedes the attack, though the latter is by no means infrequent. In the latter case there is likely to be an increased number of minor attacks, associated with headache and disordered digestion. Distressing sensory disturbances are a prominent feature, in many cases constituting the aura. Hallucination of olfaction, sight, hearing or gustation are present, and upon these are based many distressing delusions. In some cases these give rise to violent outbreaks, but in the majority of instances there is merely an increasing irritability terminating in the profound coma which accompanies a major attack. In the pre-paroxysmal psychoses the attack, usually of the major variety, generally clears the atmosphere, and the patient after recovery resumes his usual mental state.

The post-paroxysmal psychoses are far more numerous and important than the preceding. There has been much discussion as to whether attacks of epileptic mania and delirium and periods of automatism, catalepsy, dream states and hysteroid seizures more commonly follow the grand mal seizures or the minor seizures. In our experience they are far more often associated with the latter, and this seems to be the experience of the majority of observers. A question of great medico-legal significance has also arisen out of this discussion. Granting that the states of mental irresponsibility, during which most of the criminal acts performed by epileptics occur, frequently follow attacks of petit mal, it is assumed that in many cases the attack of petit mal is itself omitted, the mental disturbance being substituted in its stead, constituting the "psychical equivalent" or "masked epilepsy" of Esquirol, the "epilepsia larvata" of Morel. We shall presently see that many acts which are apparently under the control of the patient are performed during this state, and in consequence the determination of the responsibility for crimes committed under these conditions becomes of the

utmost importance. If a criminal act is committed during a period of time during which the aggressor claims that he had no knowledge of his act and that he did not later remember it certain facts in his previous life should undoubtedly be determined before he should be absolved. These are as follows:

Evidence of classical epileptic phenomena, major or minor fits recurring at more or less regular intervals; evidence of periodically recurring fainting spells or attacks of vertigo accompanied by interference with consciousness and showing some degree of uniformity in the type; evidence that the morbid mental phenomena which are assumed to constitute a psychical equivalent in the absence of any convulsive seizure, or that phenomena bearing some degree of similarity thereto, have at some time previously occurred in association with a major or minor convulsive seizure.

If one or another of the above conditions can be shown to have existed previously it may be safely assumed that a criminal act was committed under the stress of epileptic insanity. In the writer's opinion there is too much tendency at the present time in forensic medicine to minimize the motor phenomena of epilepsy as the essential clinical feature of the disease and in their stead to magnify the importance of sensory and psychical phenomena based principally upon the statements of patients without objective proof. According to one foreign writer, only 42 per cent of epileptics have convulsive seizures, the diagnosis in the remainder being based upon variations in the emotional tone, such as periodic depression and excitement, etc. It is doubtful if any American physician in asylum practice would accept such a statement. Such phenomena are common and essential features of manic-depressive insanity and other degenerative types of insanity, and to include them as pathognomonic of epilepsy would be to enormously enlarge the scope of a disorder that is even now too comprehensive.

Considering together the psychoses which occur in the post-paroxysmal state, and those which occur as psychical equivalents, the most important may be enumerated as follows:

1. Acute epileptic dementia.
2. Acute epileptic mania.
3. Transitory delusional and emotional states.
4. Post-epileptic hysteroid states, including dream states.
5. Epileptic automatism.

Acute epileptic dementia frequently follows major attacks, serial attacks or status epilepticus. It consists essentially of a semi-stuporous condi-

tion, analogous to the profound physical and mental depression following severe infectious diseases, and it may persist for many days. Recovery takes place gradually, during which there may be fleeting delusions similar in many ways to those of the post-febrile period of infectious diseases. This condition occurs especially in patients who show little if any mental deterioration in the inter-paroxysmal periods, but repeated attacks tend to result in permanent dementia.

Acute epileptic mania occurs in connection with both major and minor attacks, with the former more frequently perhaps. It may vary from an excess of irritability accompanied by an easily aroused pugnaciousness based upon delusions of persecution and mistreatment, to the most violent outbursts of epileptic furor. Such patients constitute the majority of epileptics confined in hospitals for the insane and are a menace to those about them. The mania resembles the acute delirium of profound alcoholic intoxication rather than the ordinary forms of acute mania, the exhilaration present in the latter being seldom observed. The duration is also much shorter, the usual mental state being recovered in from a day to a week. If given the opportunity, patients may show decided homicidal tendencies while in this condition. Suicidal tendencies, which are rare in epileptics, occur mostly in the depressed states which precede attacks rather than in the post-paroxysmal conditions.

Following one or more epileptic seizures of either type there may be a considerable period during which there are delusions of a more or less fleeting and temporary character. Such delusions are rarely fixed. They appear mostly in the form of accusations against attendants or fellow patients, charging the administration of poison in the food or in medicines or abuse, resulting in the bruises, etc., which are really the result of falls. The mental disturbance is seldom of so severe a nature as to cause acts of violence, although acts of sexual perversion are not uncommon. Gradually the delusions disappear and the patient resumes his usual mental condition.

Gowers attaches considerable importance to attacks resembling hysteria, which sometimes occur as sequelæ to epileptic seizures, especially of the minor type. Certainly the association of epilepsy and hysteria in asylum practice is not uncommon, and doubtless many hysterical seizures of the most startling character would by more careful observation be found to have succeeded a minor epileptic attack. Contortions of the most violent nature accompanied by animal noises and attempts at biting, etc., are of not infrequent occurrence. In other cases patients pass into a

dream state, which may resemble catalepsy or may more nearly approach the katatonic condition of dementia præcox. One patient, following a series of attacks, lay for several days without voluntary movement, with the most ecstatic expression upon her face. Others throw themselves from their beds or will assume the position of exaggerated opisthotonus. Food is usually refused during such periods. Not infrequently following minor attacks there is a period during which the patient indulges immoderately in senseless and hysterical laughter. Patients showing hysterical manifestations following epileptic seizures are of pronounced neurotic temperament.

Epileptic automatism is a condition following either major or minor attacks, more frequently the latter, or occurring independently of any demonstrable attack as the most pronounced form: of masked epilepsy, during which the patient unconsciously or subconsciously performs more or less complex actions, the memory of which is entirely lost after return to the normal mental state. Following any epileptic seizure there is likely to be some fumbling at the clothing performed in an automatic manner. One patient automatically walks around the room patting on the walls with his hands. Another repeatedly tosses into the air and catches with unflinching accuracy any small article which he may happen to have in his hands, all the while whistling a simple tune. The most common form of automatism is that of undressing, which is probably the result of a sensation of illness which suggests the desirability of going to bed (Gowers). Not infrequently very unpleasant complications are thereby brought about. Many instances in which patients, jump, walk or run with prodigious energy for several minutes following a minor attack can be cited. Attempts at criminal assault are not uncommon, and doubtless many cases of attempted homicide are committed during this state. Such was the plea of the defense in a recent murder trial in this state, and there have been many others. According to an hypothesis suggested by Austie and Thompson-Dickson and further advanced by Hughlings Jackson the condition is the result of the exhaustion of the highest cerebral centers by the discharge and the consequent temporary loss of the control which these should exercise over complex centers functionally below them, which consequently act in an insubordinate and automatic manner (Gowers).

Aside from the remarkably rational nature of some of these automatic actions and the extraordinary irrational nature of others, there are two

striking features in epileptic automatism. The first is the apparently conscious manner in which the actions are performed. The patient may converse throughout in an apparently intelligent manner, may answer questions regarding his actions or regarding other matters with readiness and some show of logic and may appear to be entirely conscious of his surroundings. Instances have been recorded of journeys covering hundreds of miles which have been taken during this state without arousing the suspicion of strangers. Yet the patient was entirely unconscious of his actions throughout. The second is the total inability to remember after the condition has passed away any of the events that have transpired. Apparently during this state he may call to mind events that have previously transpired and in a spirit of revenge may act upon real or fancied wrongs, while the faculty of inhibition is totally paralyzed, subsequently forgetting entirely that he so acted.

As examples of epileptic automatism two cases are herewith reported.

Case I. B. P., age 16, was subject to idiopathic epilepsy, grand mal attacks occurring daily. He improved during his residence in the hospital, his attacks of late occurring only one to three or four per week, many of them being petit mal seizures. From time to time periods of depression and of excitement immediately following attacks or groups of attacks were observed. Otherwise the general mental and physical condition was comparatively good for an epileptic of his age. He was a reasonable and tractable patient. On the occasion in question the patient appeared a little depressed or worried during the day, not enough, however, to cause any particular apprehension on the part of the attendants. He was noticed to be absent from the supper table. The attendants upon returning from supper searched the building and found him sitting on a stairway leading to an upper floor. His hands and face were bloody. One eyeball, having been completely enucleated, was lying on the floor in front of him, and the other was gouged out to such an extent that it dangled out upon his face. The patient when spoken to answered promptly. When asked what he had been doing he stated that his eyes itched. Observation and his statement showed he had enucleated them with his fingers very carefully, for not a scratch appeared upon the lids. He stated that he felt no pain whatever and he had no realization that he had done anything out of the ordinary. He was noticed to be in a somewhat dazed condition, shown by the absence of any reasoning powers. He was immediately taken to the clinic and the eyes dressed. When the statement was made in his presence referring to the sadness of the boy losing his sight, he promptly stated that he could see as well as anyone. He still felt no pain whatever in the eye. About midnight a mania developed, characterized by motor agitation and delirium, which continued for three days. His temperature rose to 105, being caused

no doubt by septic involvement of the orbits and trauma of the optic nerve. Death followed eighty-four hours after the injury to the eyes.

Case II. J. G., age 25. Patient has frequent severe grand mal seizures. General health excellent, mental condition comparatively good, patient as a rule being in possession of his mental faculties and a good worker on the farm. On the night in question at approximately 2 o'clock he arose quietly from his bed unobserved, went through a window, having on only his underwear. He went out on the frozen ground, walked through a briar patch down to the river, then back toward the road and was found by the attendants after having been away from the cottage approximately one hour. He was found walking up the road apparently bent intently upon some journey. He was spoken to and answered readily. When asked where he was going, he said, "Nowhere in particular." The patient remained in this subconscious, automatic mental state for about six hours. Upon returning to clear consciousness he stated that he could not tell why he went out, but that he had a clear perception of flashes of fire before his eyes, but could not tell whether he was going to or from a fire. His feet were badly lacerated and slightly frozen.

In both these cases there seems to have been total abolition of the sensibility to pain, while visual and auditory sensation were retained. In one there were hallucinations of sight. In neither was there any lucid explanation of the occurrence or any clear recollection of the events which transpired. In either case violence might as readily have been done to another, in which event grave medico-legal questions would have arisen, and for this reason the condition is one of the utmost importance. In conclusion let it be remembered that while the inter-paroxysmal mental states of epilepsy present nothing of unusual interest, those associated with attacks and those taking the place of motor disturbances are of great moment.

DISCUSSION.

W. D. Deuschle, Columbus: The doctor stated in his paper that about one person in every five hundred of the population was epileptic, and it was estimated that 42 percent of epileptics had convulsions. I do not know how we are to arrive at a conclusion as to whether or not this is true; I believe, however, that the percentage of epileptics given is no exaggeration. There are, too, I believe, many cases of epilepsy that are unrecognized. The convulsion is too frequently regarded, and by physicians, too, as the important symptom in epilepsy. This is a mistake. Loss of consciousness should be considered as the important symptom of this disease.

I have in mind several cases of epilepsy which I have reason to believe are not known to the patient or even probably to members of the family. The attacks are infrequent and the seizures are regarded as fainting spells. There is loss of con-

sciousness without involvement of the musculature.

There was a case in the Columbus State Hospital during my service on the staff of that institution, the true nature of which was in question for quite a long time. There would be long intervals in which this patient was quite rational and one of the most tractable in the institution. Suddenly there would develop a dream-like state, when she would become much confused and wander aimlessly about, or again, there would be violent outbreaks of excitement when she would attack other patients, and during this period was one of the most disturbed patients in the hospital. The nightwatch finally, after close observation, discovered this patient in a typical epileptic convulsion. At no time did she have a convulsive seizure during the day. The attacks were of the character described.

The state of double personality or epileptic automatism is probably not always recognized as a form of epilepsy. I therefore believe that it is hardly an exaggeration to say that a large percentage of epileptic cases are not convulsive in character. These cases of double personality are extremely interesting and are many times epileptic manifestations.

H. H. Drysdale, Cleveland: The title of Dr. Pritchard's extremely valuable thesis is rather misleading. In reality his paper is an exegesis of the whole subject of epilepsy. I am expected to discuss epileptic automatism and I can best do so by briefly relating the essential features of four cases which I have had the opportunity of observing during the past year.

Observation 1. The son of a distiller, married, age 32, a moderate beer and whisky drinker. Family history also tainted with alcoholism. A diagnosis of developing paresis was suggested by the family attendant. All his reflexes were of normal intensity and he never had convulsions. Several times a day for over a year he would suddenly appear embarrassed and perform inconsequential movements such as searching his pockets. These episodes would last about a minute and he would then take up the trend of his conversation as if nothing had happened.

Observation 2. A young woman pianist, age 34, single. No neuropathic or psychopathic taint in family history. For eight months she had been subject to instantaneous attacks of disturbance in consciousness. They usually occurred at the dinner table. She would suddenly turn pale, drop her knife or fork, manipulate her fingers (right) as if playing the piano. No other neurological manifestation was observable.

Observation 3. A young school boy, age 15, with marked anthropological stigmata. Sister an epileptic. Patient had convulsions in infancy. His automatism was of eleven months duration and the family attributed the condition to trauma capitis sustained three years previous. At time of examination he was having not less than three attacks daily, which consisted of smacking his lips and taking off his coat and vest. This he would do at any place he happened to be, in church, in street cars, etc. He was also subject to violent accessions of anger.

Observation 4. A young man, aged 31, book-keeper, single. Had daily attacks which became more frequent when excited. He always turned pale, gazed fixedly into space, would say aloud, "Wait a minute," take out his watch and attempt to set it. He instantly regained consciousness, appeared emotional and asked if he was losing his mind.

All of these cases presented in a marked degree, the mobile and explosive character of epileptics, but in none of them was the true condition ever suspected.

The prevailing symptoms, i. e., the brevity of the insults, the recurrence, the disturbance in consciousness with or without amnesia and above all, the lightning-like, instantaneousness of the seizures, are so distinctive that the detections of the disorder would seem easy, but this knowledge does not seem to be the common property of the profession, as many of these cases remain unobserved or are otherwise classified. The question of epileptic automatism has been receiving considerable attention from research workers throughout the world, and I had hoped Dr. Pritchard, who has had an extensive experience with epilepsy, would dwell more fully on this feature of his important subject.

Dr. Drysdale: How frequently have homicidal or other assaults been committed by epileptic patients at the Gallipolis State Hospital?

Dr. Pritchard: In my experience of three years at Gallipolis State Hospital no such incidents have occurred.

G. G. Kineon, Gallipolis: Regarding some of these automatic states, they generally follow a very slight attack. We have a case now in the hospital, one which unless you are right with the man at the time and are looking for it, you would never notice it at all excepting possibly, by a blanching of the face, the color rapidly returning, and then he will go around and around the ward and if you put a broomstick into his hand he will immediately twirl it and he will do all the tricks that a drum major will do with his baton. The man, however, can do that when he is not in this automatic state, and this is just one of the peculiarities that he has. Another time, this same man who twirls the broomstick when under this automatic influence, when in that state started to work one night after having a petit mal attack. He had gotten up from his bed and the patient in his room said it was only a slight attack. He went down to his work which is about the drug room. Was caught by the nightwatch. When the nightwatch got him and talked to him and described things to him at the time he was in an automatic state and described everything he had intended to do. He was led back to the bed, went to sleep and had forgotten all about it before morning.

As someone has remarked about people having epilepsy and without knowing it, a great many of them have a mild form of epilepsy and do not know it. The only sensation they have from getting over a fit is probably a light headache. They themselves will not know what has been the matter. Their folks will be the ones to know it.

I have never in the three years I have been among the 1400 patients, known of any criminal act taking place. The only time when violence was done, was in a mania, when the patients would attack each other or people that came in contact with them, and I think a great many times people are given credit for automatic epilepsy when really it is all a vagary or scheme.

"SOME THOUGHTS UPON DERMATOLOGY."

DAVID MOURY, M. D.,
Bellefontaine.

[Read before the Ohio State Medical Association, May 6, 1909, in Cincinnati, Ohio.]

The above title announces to my hearers that a discussion relative to the skin and its diseases will now be presented. At once, we observe the vastness of the subject at hand. It is apparent that only comparatively a few selected facts and underlying principles can be embraced within the limits of my paper for consideration. It is essential for the practitioner in acquiring a proper knowledge of skin diseases to be impressed, that these diseases belong to the general domain of medicine and surgery, and should not be studied in a narrow manner but in the broad light of pathology and medicine.

Today, the morbid changes in the skin are generally admitted to be, in many instances, more or less connected with, and, I may say, the expression of deranged systemic conditions if not, an index to lesions of, the viscera. The anatomy of the skin—consisting mainly of the epidermis, corium and cutis vera, together with the capillaries and nerves for the supply of this organ; its situation exposing it, to conditions that react upon it, the skin is often the seat of irritations which develop into inflammations, and varied as these externally caused disturbances are they act as congeners which are etiologically related to visceral diseases, septic poisoning, nervous affections and gastrointestinal disorders. Certain kinds of food will be the occasion of morbid outbreaks upon the skin, and a long list of drugs can be given, the ingestion of which will produce the most varied dermal lesions.

Again, certain skin diseases are due to some hereditary or acquired morbid conditions inherent in the structure of the skin itself. Careful study and observation soon familiarize the mind with the dermal lesions of external origin. To establish an etiological cause or factor, for cases in which external irritation has no part will require investigations made from other viewpoints. In

proceeding, it is well to first eliminate all external causes as factors in the case. This clears the way for inquiry and search for an internal cause; and, the success of the doctor will depend upon his acumen, broad and intimate knowledge of medicine, his powers of observation and the retentiveness of his memory in dermal affections. Such cases call into service his knowledge of physical diagnosis, the physiology and pathology of the circulation, the relation of the nervous system to diseases of organs and tissues, of the reaction of affections of the nervous system upon the skin, of the correlation of nervous sympathies, of simple and obscure morbid states, of infectious diseases, local and general, of the vicissitudes of age and sex, of morbid conditions resulting from changes of the season, from climatic influences, and from food and drink, of the deviations of health due to race, and lastly of the conditions known under the head of heredity. To be a thorough practical dermatologist he must be an advanced and educated doctor.

Two special requirements in the study of the diseases of the skin are:

First. A fair common sense, not too minute and technical knowledge of the anatomy of the skin and of its appendages.

Second. A clear and practical understanding of inflammation, anemia and hemorrhage, of hypertrophy and atrophy, of new growths, and of the microscopic appearances of the animal and vegetable parasites. Having erected a good foundation, we can proceed in the development of much better qualifications, and in the future serve our clients better, accomplishing more in relieving suffering.

The primary lesions of the skin are eight in number, as follows:

First. The erythematous spot.

Second. The papule.

Third. The tubercle.

Fourth. The vesicle.

Fifth. The pustule.

Sixth. The bulla or bleb.

Seventh. The wheal.

Eighth. The tumor.

The secondary lesions are seven in number, as follows:

First. The scale.

Second. The excoriation.

Third. The fissure.

Fourth. The ulcer.

Fifth. The crust.

Sixth. The cicatrix.

Seventh. The macule, or pigmentation.

Of these two orders of morbid change in the skin all eruptions are composed. It follows, there-

fore, that these should be familiar at all times to the doctor. Each one is an essential factor in arriving at a correct diagnosis in every case of skin disease presented for treatment.

It is always well to seek out the most recent portion of the eruption, learn its lesion or lesions, then build on the results; and it is not well to form opinions upon the mature eruptions, but to reach them by induction. The diagnosis cannot always be made at the first examination.

ECZEMA.

Ecze^ma is by far the most common of all diseases of the skin encountered in this country. The American statistics show that out of 123,746 cases of skin diseases, occurring in all parts of the United States and Canada, no fewer than 37,661, or nearly thirty and a half percent, were cases of ecze^ma. When we add to this the fact that most cases of ecze^ma are disfiguring to the personal appearance, or, are accompanied by more or less burning, itching or other uncomfortable and painful sensations, it must be admitted that this disease is the most important of all skin affections for the physician to know and to treat intelligently.

The trained eye will see at a glance that the disease is inflammatory in nature, being attended by the usual phenomena of heat, redness, swelling and discharge. Sometimes pain is present, but it is usually substituted by itching and burning. In this connection we find erythema, vesicles, pustules or papules as characteristics of the disease. These show the clinical varieties of the disease. As the case progresses, scales and crusts will form. Where vesiculation is a prominent feature a discharge is common. There is always more or less infiltration and thickening of the skin, depending upon the duration and severity of the disease. The affection is at no time contagious.

The primary lesion most prevalent in each case designates the disease. Should erythema or diffuse redness be the most prominent feature of a certain case, the term ecze^ma erythematosum is employed; if vesiculation, ecze^ma vesiculosum; if pustulation, ecze^ma pustulosum; if papules are most common, ecze^ma papulosum. Chronic cases such as have leg ulcers are termed ecze^ma rubrum. When involution is well advanced desquamation is common, and these cases are called ecze^ma squamosum.

My allotted space and time forbid a full nomenclature.

The varieties are not permanent types. That which was erythematous yesterday may, and often is, vesicular today, and a vesicular of today may be pustular tomorrow. An ecze^ma rubrum be-

comes an ecze^ma squamosum as resolution begins, but any undue irritation may readily engraft a vesicular condition upon it. Thus the term ecze^ma is practically sufficient, reserving the others to express the clinical changes as they occur from time to time.

It is of the greatest importance to differentiate ecze^ma from the many other skin diseases which it resembles. To do this, its characteristic feature must be kept fresh in the mind.

PROGNOSIS.

Cases sometimes get well spontaneously. It is a curable disease. A fact of value in this connection is, for the doctor to take care of the man and the man will take care of his disease. Constitutional remedies, judiciously employed, are almost always needful and prove of decided benefit in the majority of cases. The subject of diet should be carefully considered, and each case receive especial directions to suit the conditions existing. The best hygienic living should be insisted upon. The inability of the skin to stand irritation on account of the continuance of environment causes; recurrences are common. Remove patient from all sources of irritation and place him upon the treatment indicated in his particular case and satisfactory results will be reached in a comparatively short time. The fact that many of the cases presented for treatment cannot change their environments sufficiently to avoid constant sources of irritation explains why so many do not get well, notwithstanding the best treatments are given. Certain types are more easily overcome than others. The dry forms, the papular varieties, are generally more difficult and resist treatment. Determined perseverance will finally succeed.

TREATMENT.

To guide the care of a case of ecze^ma toward a cure it is necessary to consider every detail in the patient's manner of living and notice, in minutiae, every manifestation of the disease in its protean developments. This disease, like other diseases, varies in different individuals; and in its recurrences in the same individual, so that the medicaments should vary in kind and dose, but this logic is often ignored even by the intelligent. The doctor should know well the remedies he makes use of either internal or external. All the vaunted and sure-cure preparations only express ignorance of the disease in its completeness. These are composed of drugs in definite proportions. It is impossible to continue their use in a case for a considerable time without irritation on account of the changes constantly taking place in the disease.

Local treatment properly given will often result in a satisfactory cure, but generally, both local and constitutional treatments are necessary. It is well to remember the two following principles in regard to local treatment of eczema. These are, first, that in the acute form the treatment can scarcely be too soothing.

Secondly, that in the chronic form the treatment can hardly be too stimulating. Individual circumstances will modify the above enunciated principles.

The scope of this paper being fully taken up, I now leave its contents for your respectful consideration.

DISCUSSION.

M. L. Heidingsfeld, Cincinnati: Dr. Moury's interesting and valuable paper merits some discussion. I think that certain principles which the doctor has mentioned appeal to all of us very strongly. I know nothing interests me more in the paper than the fact that the study of dermatology should be preceded by study of the practical, underlying principles of general medicine, histology, pathology, bacteriology, etc.

This appeals to me particularly because our specialty is very unfortunate in that we must compete with a lot of quacks and self-styled dermatologists who have no knowledge except that gained from the counters of department stores. If the public and the profession realized that dermatology is not a simple and indefinite study, some salutary measures could be promptly instituted. Shop girls with six months' experience behind a counter in some drug or department store should not be permitted to style themselves dermatologists, and to indiscriminately practice, diagnose, and prescribe. Such practice is not only wrong and unjust to the public which is thereby made prey of, but to those who have devoted their time and expense in properly perfecting themselves for the study of dermatology.

One word about eczema and I am through. I was very much impressed with the broad, wholesome manner in which the doctor presented this subject. I do not think we ought to digress from the principles he has laid down, but to consider the question in its broad, general aspect; one specially good principle enunciated is that you cannot treat an acute case too mildly, and a chronic case in too simulating a manner. Eczema is not a very clear subject not only to the profession at large but to dermatologists as well. Eczema, to my mind, is more of a symptom than a disease. The diagnosis of eczema is a very obscure diagnosis; it is like bronchitis or pneumonia. If we can tell what kind of bronchitis or pneumonia we have to deal with, we understand the case much better and can treat it more intelligently. Bronchitis and pneumonia may come from a great variety of causes. The same is true of inflammations of the skin, eczemas, and it is our duty, if possible, in every case to find out the special cause and say it is a dermatitis from this, that or the other thing; if we cannot, we must profess our ignorance and shortcomings, and fall back on the old, staid, obscure diagnosis of eczema.

SOME ADVANTAGES OF THE SUBMUCOUS INCISION FOR THE REDUCTION OF HYPERTROPHIED TURBINALS.

C. P. LINHART, M. D.,
Columbus.

[Read before Ohio State Medical Association.]

A satisfactory method of establishing a permanent reduction of hypertrophied inferior turbinals, is yet an unsolved question in nose surgery. The various surgical procedures heretofore used for shrinking the hypertrophied condition are more or less defective. Actual cautery and chemical caustics leave an open wound which heals by the slow process of granulation. Then along the line of application there is necessarily a destruction of the ciliated epithelium, and in the use of chemical caustics it may amount to considerable unless it is handled with exceeding care.

After any operation necessitating a cutting of the mucous membrane, hemorrhage from the dilated veins is sometimes severe. Taking out of the packing often causes troublesome bleeding, and in the after treatment the removal of blood clots and crusts is a cause of frequent oozing, which may continue during the entire course of healing.

While infection through the open wound is rarely severe enough to produce a constitutional disturbance, it does cause increased secretion and delays the healing process. If a portion of the lower margin of the inferior turbinal is removed, the loss of function and the resulting scar are a source of permanent annoyance, and interference with the physiological functions of the nose is in proportion to the amount of mucous membrane destroyed. Turbinectomy either by scissors or snare is an easy operation to perform, but is seldom justifiable on account of the destruction of the large mucous surface that cannot be replaced, and the severe hemorrhage which is liable to follow. It also leaves a sensitive scar tissue which is unable to perform any physiological functions. True, the latter operation makes a permanent opening through the nose, but the breathing space is along the floor of the nose, and the operation does not shrink the middle, and often the most redundant portion of the turbinate body, so as to keep it from coming in contact with the septum. The hole may be made large enough to permit nasal breathing, but the inspired air will not receive the amount of moisture and heat it would get were it to pass over the entire surface of the turbinal. And while the patient may be better able to breathe through his

nose, the condition for which the operation is performed is not improved, viz., good ventilation, enabling the turbinal to give the proper heat and moisture to the air on its passage to the pharynx.

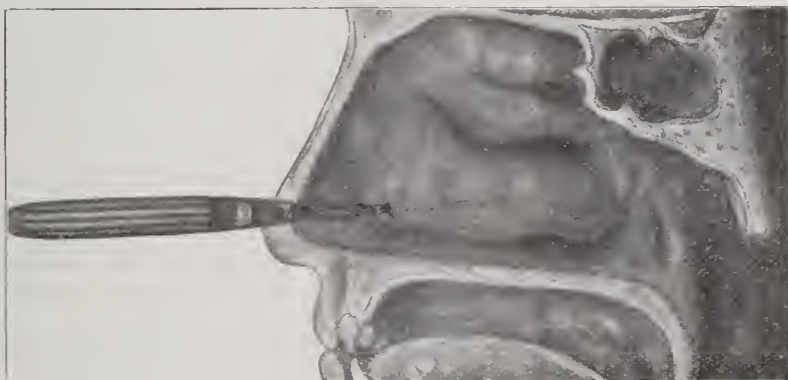
Of the various methods used the electric cautery has appealed to me as being more efficient, as it causes less damage to the secreting surfaces, and for several years it has been my practice to use it in nearly all cases of intumescent rhinitis. The main objection to this and other escharotics, is that the scar tissue stretches out after a time, and in from four to six years the operation has to be repeated.

On section of the inferior turbinal, the anterior part shows an abundance of glands, while the posterior area is composed for the most part of cavernous or erectile tissue with a very few glands. In detail this region presents a series of erectile vascular channels more or less filled with blood, which occupy the greater part of the sec-

shrinkage, it did not produce in many cases the desired result, particularly where there was considerable redundancy of tissue. I then took a dental hatchet, it served very well to scrape the periosteum, yet I wanted an instrument to cut across the venous sinuses as well.

Using the dental hatchet as a model, I had G. Tiemann & Company make an instrument having a long shank with a blade two millimeters in length at a right angle to the shank. The blade is made with the cutting edge facing the shank so as to cut across the venous sinuses, and is sharp enough at the point to cut toward the lower edge of the turbinal, and also to scrape the periosteum.

*For my more recent operations I have devised a long, slender, dull-pointed dissector, with a slight curve at the end that it may follow the contour of the turbinal bone, which is used to dissect a passage way along the bone preparatory to the introduction of the hatchet-knife. The



tion between the surface epithelium and the periosteum. Their walls consist of white fibers, with fine nucleated tissue corpuscles, and a few erectile fibers with numerous muscle fibers which run in all directions and form interlacing bundles between adjacent spaces. (Lennox Browne.)

Kyle mentions an operation to reduce the tissue without leaving a surface scar. He scrapes the turbinate bone by means of a sharp-pointed probe, making a simple puncture, passing the probe directly through the membrane of the periosteum, and by gently scraping the tissue sets up sufficient inflammatory action to produce a contraction. Delavan, quoted by Knight, reports permanent results by submucous puncture. Lake, in his new book, mentions the submucous puncture.

Six years ago Dr. Nelles and I commenced submucous incisions for the reduction of hypertrophy of the inferior turbinals. The first operations were simple punctures, followed by a slight scraping of the periosteum, and while this caused some

latter instrument has a short blade at right angles to the shank, with a dull cutting edge facing the handle, so that the knife is introduced to the extremity of the opening made by the dissector, and is made to cut by drawing across the long axis of the turbinal from the rear to front. There is a circular mark on the shank of the dissector and on the hatchet-knife, two and a half inches from the tip, so that in the average nose when the point of the instrument reaches the posterior end of the inferior turbinal, the mark will be at the tip of the nose. This, however, is only an approximate guide, as the length of the turbinal varies in different individuals, as does the distance of the posterior nares from the tip of the nose. In making the initial incision for the introduction of the dissector, a tenotome with a long, slender shank is used. Any small scalpel would do for

*Laryngoscope, February, 1908.

this purpose. I find the tenotome quite convenient, particularly where an incision is to be made well back in the nose, the small knife with the long slender shank permits of a good view of the parts.

The operation is as follows: The nose is made as aseptic as possible by some suitable alkaline wash. The mucous membrane is thoroughly cocaineized across the long axis of the turbinal over the site of the proposed submucous incision. For this purpose a pledget of cotton soaked in a 2% solution of cocaine is applied. This is allowed to remain for five minutes, after which a 20% solution of cocaine is rubbed into the turbinal with cotton-tipped probe, three or four times at intervals of two minutes, or until the parts are thoroughly anesthetized.

A perpendicular cut one-eighth inch in length is made through the mucous membrane, just anterior to the hypertrophied portion of the turbinal. The slender dissector is then introduced and passed straight back close to the periosteum, in the long axis of the bone to its posterior extremity. On account of the uneven surface of the outer border of the turbinate bones, particularly of the inferior, it is often necessary to use considerable force and some manipulation of the handle of the instrument up and down and from side to side, so that the point of the dissector may pass over the little bony protuberances, in its passage back. In some cases where there is only slight intumescence, scraping of the periosteum and gentle breaking down of some of the erectile tissue with the dissector will be sufficient. Where there is considerable distention of the venous sinuses it is necessary to cut through their walls and break them down in order that sufficient inflammatory action may produce the necessary adhesions for the desired shrinkage. For this purpose the hatchet-knife is introduced with the blade flat against the periosteum of the turbinal, back as far as it is desired to cut. The knife is then rotated so that the blade will reach in toward the greatest prominence of the flabby turbinal. If the redundant tissue is hanging down on the floor of the nose as well as projecting against the septum, it will be necessary to make a downward as well as an inward cut. The knife is then turned out toward the bone and the periosteum torn from rear to front. The edge of the hatchet-knife faces the handle and the knife is always drawn toward you when making a cut; this avoids danger of making a puncture or tear as could easily be done by a pushing movement. After withdrawal of the knife a tight-fitting nasal splint is introduced to hold the cut surfaces as

snugly as possible against the torn periosteum. It is kept in place for forty-eight hours, after which time sufficient adhesions will have formed to bind the redundant tissue closer to the bone.

Sometimes there is a slight hemorrhage from the initial incision or an accidental tear in using the hatchet-knife, which can usually be controlled by an application of adrenalin, and the pressure of the splint. In fact, after completing the submucous incision I always make an application of adrenalin to shrink the erectile tissue of the turbinal, which allows a tighter fitting splint to be introduced. The operation itself is best done without the use of adrenalin as this drug shrinks the venous sinuses and erectile tissue too much to allow free play of the knife. To avoid tearing the mucous membrane, the hatchet-knife must be introduced with the point close to the periosteum so as to evade the danger of pushing it through the turbinal just beyond its greatest convexity, into the cavity of the nose. Should this accident occur and the knife be drawn forward with cutting edge toward the turbinal, it will make an ugly tear in the mucous membrane, cause a severe hemorrhage, necessitate packing the nose, and make an open wound that will have to heal by granulation.

The operation is intended particularly for those cases of simple intumescence, with vaso-motor paresis of the walls of the blood vessels composing the erectile tissue, where the turbinal has become flabby from repeated attacks of rhinitis. Very good results follow the operation on turbinals in which the tissue has been made dense and thickened by repeated inflammatory attacks. In making the first operations by this method I did not use the splints to hold the cut surfaces close to the bone, and often failed to get sufficient shrinkage, especially when there was considerable intumescence, but since using the splint I have gotten much better results.

There are many cases with slight swelling of the turbinals blocking the nose, accompanied by profuse secretion which causes considerable annoyance. It had formerly been my practice to apply some stimulating medication to the parts in an effort to bring about a normal condition. There was often considerable improvement, for a time, but sooner or later there would be a return of the original trouble, and I find in these cases particularly that this operation has proven satisfactory.

The chief points of advantage of the submucous incision are: It shrinks the vascular tissue of the turbinals, allowing free respiration of air through the nose; cutting across the walls of the

venous sinuses causes their obliteration, and a permanent shrinkage results from the inflammatory adhesions; the base of the scar is on the turbinate bone, the seat of greatest traction; the operation being submucous there is no troublesome hemorrhage and practically no danger of infection; there is no destruction of mucous membrane, and no open wound to heal by granulation; it requires but a short time for surgical treatment (usually two or three days), and on account of no destruction of mucous membrane, there is no interference with the physiological functions of the nose.

DISCUSSION.

Dr. Harris, Dayton: For the last year I have been using a very simple method, and have gotten some very good results, but have not had enough experience to form conclusive ideas. I want to ask if anyone else has had any experience with this method. It is termed voltaic turbinal puncture. There was an article in the *Journal of the A. M. A.* in 1907, and I have followed the method detailed in this article, and, as I say, have had some very satisfactory results.

This writer used a gold needle and a galvanic current. He introduced the needle at the anterior tip of the bone, passed it straight through the soft tissues two and one-half or three inches, using the negative pole, using three milliamperes about three minutes. He claimed such results that I thought it worth a trial. I have tried it, but not very extensively. I have used it about fifteen times and a large majority of the cases have been successful. It is simple, there is absolutely no bleeding, and no destruction of the membrane.

I would like to ask if anyone else has had any experience in this method, and if so, what it has been.

F. W. Blake, Columbus: In regard to the use of electrolysis, for a number of years I have used a little instrument devised for that purpose, consisting of two platinum needles one and one-half inches long, insulated and mounted parallel to each other. These are passed into the turbinate, and the current passed from needle to needle. As you have not the resistance of the skin to overcome, you can use a much smaller voltage, with far less diffusion of the current, than when one needle and a sponge are used. The transverse passage of a current through the head is apt to cause vertigo, in some instances excessive; so I much prefer the double needles. The results of electrolysis are usually excellent.

By the courtesy of Dr. Linhart, I have used his instruments in the operation described by him, and found it a very satisfactory procedure. One thing in its favor is the prompt result, attained, as he says, in three or four days. This is due to the rapid healing of a clean surgical traumatism, while after electrolysis there is more reaction from the caustic deposited, to be followed by cicatricial retraction.

A. C. Carney, Hamilton: In answer to Dr. Harris, I have had some experience in this, using

the method of Dr. Blake. I just use a common hatpin, dressed off in triangular shape at sharp end and shellacked down to about an inch from the end. In using these, you want to be very careful to get the shellac introduced under the turbinal tissue, or there will occur a sloughing at the point of introduction of the needles which is not desirable, as it is a point for entrance of infection.

I have had only a small number of cases, but so far have had good results. Cannot say that I have regretted using it in a single case.

Walter Murphy, Cincinnati: The experience I have had with these cases is that I got no permanent results unless I got a complete destruction of the vessels for a greater area than simply by cutting through at the junction of the soft tissue with the bone. Like Dr. Beck, I have given up that plan, and am now using scissors, cutting off the lower edge of the turbinal, always previous to operating, contracting the tissue as much as possible with adrenalin and cocaine, to determine how much hypertrophy we have, and how much resurgence. In that way we can determine how much of the tissue to remove. While we may have a little destruction of the mucous membrane, it does very little harm, because of its position.

There is no doubt but what this work, as described by the essayist, will help us in some cases, but the unfortunate experience I have had is that they will return to me, or go to somebody else, in the course of time, with the same conditions existing.

Joseph Beck: I was very unfortunate in not hearing this entire paper, but the closing remarks gave me the drift of the subject, and I will confine my remarks to my results in the surgery of the inferior turbinal body so far as incision of the membrane is concerned. When Dr. Yankauer brought out his experiments, it interested me very much, because, as you remember, he would do a submucous incision, cut out the bone, and suture. Since that is a thoroughly surgical procedure, I tried it. I tried it in twelve cases, and then I stopped. In eleven I failed entirely. Anybody who attempts to do this will find it would be very easy if the bony structure of the inferior turbinated body was smooth bone, but as a matter of fact on examination of the bones you will find there is a very great irregularity in the surface, and it is impossible to do any dissection without tearing the membrane. Besides, on histological examination, we find that the hypertrophy is not of the periosteum itself, but the degeneration is in the overlying tissue, and the mere cutting of the vessels will not do away with the trouble, but the tissue itself must be removed.

I notice the doctor confines his operation to the turgescence type, and I can easily see that cutting off the blood supply there will do some good for a while. I have dissected the membrane, but I cannot see any permanent results unless the doctor would cut off some of the bone; then he would possibly get better and more permanent results. Of course, with a large experience like Dr. Linhart's his opinions would have more value than mine in a discussion.

I cut off the hypertrophy and remove the lower edge of the bone with scissors, and if it is a posterior hypertrophy I snare it off and then compress with my conchotribe. That is my procedure in working on the turbinal in true hypertrophy.

Dr. Rinehart, Dayton: I was very much pleased both with the paper and the discussion; but there is one point that I wondered was not brought out.

There is so much said about intumescence, tumescence and the work upon the middle turbinal to reduce the intumescence. I wonder if that intumescence will not in a great measure reduce itself; if we remove the cause; and the cause, it has appeared to me, is often within the nose; but outside of the meatus. I find a number of these cases. When we look at natural openings of the ethmoidal cells we find a mucous or muco-purulent, or purulent discharge from these cells. In investigating the opening of these cells we may find a little polypus making an effort to come out. We make the opening a little larger and take hold of this polypus and withdraw it,—about the size of a grain of wheat, a grain of corn, or a good-sized soup bean—mucous follows; occasionally pus flows. Now, I have wondered whether any of these cases will ever get well by treating the turbinate, if we leave the ethmoidal cells filled with polypi? If you remove these polypi from the ethmoidal cells and let cells heal, the intumescence will nearly always be taken care of in six months or under.

I have had some considerable experience in just such cases, which proved to have been caused entirely by ethmoidal, or sphenoidal, infection, or both. I recall a machinist who would use six or ten handkerchiefs during the day. This was not just once during the year, but constantly. The middle turbinates were very large with intumescence; as well as some hypertrophy. By investigating and after which opening the ethmoidal cells, finding the polypi and taking them out, the patient was perfectly comfortable, and discharge was arrested.

These cases are pseudo-hay-fever cases; and it looks to me that we will get better results by getting the cause removed. This being done, in a short time the trouble is overcome.

Dr. Linhart (closing): In the paper I gave little of the anatomy of the nose. You remember that the turbinal is full of venous sinuses, surrounded by an erectile muscular tissue. The cut can be made in any direction, up, down, or in toward the septum, but always thoroughly scrape the periosteum of the turbinal. Although it is possible to shrink a turbinal too much and make too large a space, yet the operator will meet with disappointment unless free incisions are made in the directions indicated by the enlargement. The use of a cotton splint by pressing the erectile tissue against the turbinate bone until adhesions are formed, gives a better result.

My objections to cutting the lower border of the turbinal are stated in the paper. The operation is unsurgical and does not give the desired relief.

MEDICAL ECONOMICS

By J. W. CLEMMER, M. D.

SECTARIANISM.

Science recognizes neither dogmatism nor creed with which both medicine and religion are still more or less afflicted. The progress in scientific knowledge exposes the frailties of sectarianism. Dogmatism is left behind in the march of human progress. In recent years the work of re-organization in the church and in medicine characterizes the activities of both institutions. Controversy about creeds is less indulged in and less acrimonious. Pulpits exchange ministerial service among all creeds. Clergymen's associations are representative of all denominations. Intolerance and dogmatism are rapidly disappearing from the customs and tenets of the church.

In medicine the same evolution of progress is manifest. Sectarianism in medicine, as in the church, is a mere travesty upon the worth and dignity of professional life. Intolerance has given way to harmonious action. Scientific medicine has buried the hatchet of sectarianism. Affiliation of creeds, under the banner of science and prog-

ress, is witnessed in every community. Medical societies everywhere admit qualified physicians of whatever denomination. The spirit of progress has brought harmonious action among all schools. The wonderful advance in prophylaxis, in serum medication and psychotherapy, will not suffer a sectarian label. No man or sect has a copyright on natural phenomena or scientific fact.

MEDICAL COLLEGES.

Attention is called to the aggressive work of the Council on Medical Education as shown in its Fifth Annual Report, requiring a booklet of 169 pages of closely-printed matter. Its meeting this year was attended and its work facilitated by representatives of the government departments, state societies, state medical boards, medical and liberal arts colleges and national medical societies. Under the influences of these united forces, the battle for ideal medical standards, especially in educational work, on a parity with other countries, promises a victorious issue in the near fu-

turc. The present goal is a five-year medical course, and a preparatory course of four years of high-school training, with one or more years of physics, chemistry and biology.

The present situation of medical education, according to Chairman Bevan, demands, "(1) the passing of commercial medical schools, and the merging of the better schools to form strong medical departments of universities; (2) endowments, both private and state, for the maintenance of such departments. The experience of the last two years has shown clearly that the modern medical school needs endowments as it cannot be properly supported on the fees of students, and it has been demonstrated that such endowments can not be secured for the independent medical school."

Secretary Colwell reported that during the year there were colleges merged at Louisville, Cincinnati, Keokuk, and in California. Ten independent colleges go to form five medical departments of universities. In the past five years, of the 43 colleges closed, 16 became extinct and 27 were merged. The cooperation of interests in general and medical education will continue to respond to the demands of progress in other cities and states until each of the larger cities will become the seat of a great university medical school as exemplified by Berlin, Paris or Vienna.

THE RELATION BETWEEN THE GENERAL PRACTITIONER AND SPECIALIST.

The advance in medicine in its several branches opens up many avenues for the life work of the physician. The general practitioner can not meet present demands as in pioneer days, when practice included little else than obstetrics, traumatic surgery and drug therapy. The evolution of scientific medicine, with numerous branches each requiring special training and qualification, has differentiated into the specialties. General practice has been more and more circumscribed. The family physician does not cover so wide a field, but he does better work. In his distinctive field the exactions of scientific advance are just as decisive as in the field of the specialist. The work of the general practitioner, hedged about by specialists, has limitations akin to those of a specialty. The relation between the specialists and general practitioner is one of parity. Their work is supplementary.

The special knowledge and skill required of any specialty, worthy the name, demands all the ener-

gies of its devotees. This is equally true of general practice. The highest attainments in both can be secured only by such qualification. In centers of population specialization attains full measure of efficiency largely for the reason of hospital facilities. Here, too, the general practitioner is better developed within his narrowed field of practice.

A matter of complaint growing out of this situation is that some specialists do not respect their own confines while encroaching upon the dominion of the general practitioner. In a dull season, when the waiting room does not offer a candidate for one of the otomies, or a patient with a splanchnic organ out of commission, it is easy to pick a few clinical roses hanging over the walls of general practice.

These complaints are not a matter of ethics, though less important elements enter the code. It is a matter of principle upon which rests the dignity and worth of distinctive practice, in which the general practitioner makes equal claims to recognition with the specialist. The policy of self-defense and distinctive practice direct patronage to the specialist who stands pat in his profession of specialization.

The Humanity of Animal Experimentation.--Millions of animals, birds and fishes are tortured and slain every year to provide food, clothing and mere sport for mankind, and the zoophilists say nothing; but when a few hundred or a thousand animals are sacrificed for the sake of knowledge that will save the lives of countless children and avert destructive epidemics a cry of pain goes up, and the lawmakers are prayed to arrest the progress of medical science. They will not do it, of course—they cannot do it—for the great mass of humanity is sane, but the periodical agitation against animal experimentation is none the less distressing to the lovers of their kind.—New York Medical Journal.

The Medical Profession in 1900.—The total number of physicians on the medical directory for 1910 is 40,538—an increase of 566 on the previous year. This number includes only those who have qualified in this country and not those who have done so at the colonial medical schools of Australia and Canada. In 1901 the number on the directory was 36,354, and the increase on the previous year was 703. Since that year the annual increase has fallen off, reaching a minimum of 289 last year, but, as the figures given above show, the annual increase again tends to rise.

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THE DEFENSE LEAGUE PLAN.

Correspondence with several state associations shows that medical defense in connection with membership of these bodies is no longer in the experimental stage, and has demonstrated great possibilities for the mutual advantage of the members and the associations.

For the former it provides excellent protection at a very modest cost—much less than the commercial companies can possibly afford, as very properly such companies have to provide for their profits in addition to the expense for procuring business. It is true that most of the state associations provide only for the legal expenses of the defense and not for payment of any adverse judgments. Experience, however, has shown that this is the best plan; a determined front is, in most cases, all that is necessary to put a stop to what have been found to be largely purely black-mailing schemes. Many a case has been settled by payment of a relatively small sum to avoid the legal expense of a defense together with the loss of time, mental wear and tear, and unpleasant notoriety; this is paying tribute to the forces of evil, and should be discontinued.

The knowledge that every case of alleged

mal-practice will be strongly defended will make an end of a large majority of them *before they have begun*—to use an Irishism—and the practice will shortly be abandoned for other and more profitable schemes. The medical profession owes it to itself to unite in defense of each reputable member, for each case settled out of court, or not well defended, hurts the prestige of us all.

Another good result observed in other states, has been the better feeling engendered among physicians. It is said that members have hesitated to criticise fellow practitioners when they realized that such criticisms might lead to legal suits for which they must help pay their quota—not a greatly elevated sentiment, but one to be thankful for if effectual.

The good resulting to the State Association has been found to be equally great. Increased membership, greater inducement to join, concrete advantages to offer, enhanced solidarity, etc., etc.

It is certainly time for Ohio to wake up to the possibilities offered, and at least carefully consider the question. The subject will unquestionably be brought before the House of Delegates at the next annual meeting in May, and we would urge all in the meantime to give it some consideration, discuss it in the county societies so that the

delegate will come prepared to express the sentiment over the state. It has proven very successful in many states already; others are planning to take it up this year. Let us at least carefully investigate the subject, and if found practical and beneficial, by all means adopt it as promptly as possible.

THE FIGHT AGAINST TUBERCULOSIS.

On another page of *THE JOURNAL* will be found the report of the preliminary meeting the commission appointed by the American Veterinary Medical Association to study the question of controlling tuberculosis among domestic animals.

The work of this very important commission should be watched with great interest as presenting possibilities for material assistance in the present warfare against tuberculosis.

Whatever one's views may be in regard to bovine and human tuberculosis, the idea of eating diseased meat or drinking milk from diseased cattle is sufficiently repugnant to call for the strictest safeguarding of these food substances; but when to this is added the strong possibility of infection from these sources, not only the most stringent inspection of the foods themselves is demanded, but also the study of their sources, surroundings, and the entire stamping out of the disease among our domestic animals are obvious and essential prophylactic measures.

While much has been done along these lines already, we believe that this commission has great opportunities for carrying on the work still further, and we hope that it will receive every help and encouragement. Taking up this project is a strategic move; the attack is directed at one of the very sources of the disease affecting the human victims. Every human case prevented, stops a focus of infection of incalculable possibilities for harm.

While mentioning this point we would reiterate our views on the greater necessity in the fight against tuberculosis, of hospitals or sanatoria for advanced than for incipient cases.

One constantly hears of the strict inspection of patients applying for admission, and the careful selection of favorable cases for treatment in our own modern sanatoria. While this is an excellent thing for the statistics and reports of these institutions, showing as they do most excellent results as far as improvements and even cures, it is not so advantageous for the community at large. For every favorable case admitted, several unfavorable ones are rejected, each of whom becomes a focus for infection in his or her own locality.

We believe that the great and crying need at present is not more hospitals and sanatoria for the incipient cases, but rather institutions of this sort for advanced cases. Incipient cases can be very advantageously treated in a very fair per cent at home, and while perhaps not a great deal may be accomplished for the victims of advanced tuberculosis, observation has shown in other countries that such patients after a training in the proper personal hygiene received in such sanatoria may, after a stay of but a few months, return to their homes with the dangers and opportunities for giving the disease to others reduced to a minimum.

It is far better in the long run to prevent the spread of the disease than to cure a certain per cent of cases which have already developed.

THE NEW DIRECTORY OF THE A. M. A.

The second edition of the A. M. A. Directory has proven a most reliable work and a great credit to the Association. Great pains were taken to make it absolutely trustworthy and these appear to have been highly successful.

The amount of work necessary to pre-

pare and publish such a book is simply monumental; physicians are constantly changing; they are notoriously lax about answering communications, and all in all, the difficulties in securing proper lists are very great.

The editors are to be congratulated on the appearance of the work, its mounting, general information, and above all its very general accuracy.

EDITORIAL NOTES

AN INTERNATIONAL COMMISSION ON CONTROL OF TUBERCULOSIS OF DOMESTIC ANIMALS.

The American Veterinary Medical Association has recognized for some time that the question of tuberculosis control work among domestic animals was a big and very different problem of universal interest and fundamental importance, and one that must be met sooner or later.

This association clearly recognized that certain great interests are concerned in any dealing with this problem. Fundamentally these are: *First*, general society interested in this question as a public health measure; *second*, the live stock producer, especially interested in the financial questions of profit and loss—the producer of animal foods for human beings; and, *third*, there was the manufacturer of these animal foods, the packer; and, *fourth*, the veterinary profession, involved as sanitarians and practitioners intimately related on one hand to the producer and on the other hand to the consumer.

With these considerations in view, the American Veterinary Medical Association made provision at its last session for the creation of an International Tuberculosis Commission which should fittingly represent all these great interests. The essential duty of this commission was to study thoroughly and report upon the general problems of control work rather than upon technical research problems.

The following gentlemen were selected to represent the United States on this commission: Hon. W. D. Hoard of Wisconsin, a practical dairyman, breeder, farmer, and editor of Hoard's Dairyman; Dr. John R. Mohler, chief of the Pathological Division of the Federal Bureau of Animal Industry; Dr V. A. Moore, professor of pathology and dean of the veterinary college at Cornell University, New York; Dr. M. P. Ravenel, professor of bacteriology, University of Wisconsin, and member of the Wisconsin State

Live Stock Sanitary Board; Dr. M. H. Reynolds, professor of veterinary medicine, University of Minnesota, member and organizer of the Minnesota State Live Stock Sanitary Board, and Dr. E. C. Schroeder, superintendent of the Federal Bureau of Animal Industry Experiment Station.

The members selected to represent the Dominion of Canada were: Hon. W. C. Edwards, Ottawa, one of Canada's most famous breeders of shorthorns; Mr. J. W. Flavell of Toronto, a prominent Canadian packer; Dr. C. A. Hodgetts, Chief Health Officer for the Province of Ontario; Dr. J. G. Rutherford, Veterinary Director-General and Live Stock Commissioner, Ottawa; and Dr. F. Torrance, Winnipeg, professor of veterinary medicine, University of Manitoba, and a prominent Canadian veterinarian.

So far as the writer knows, credit for the original suggestion and for pushing the movement along until it finally resulted in the creation of this commission, belongs especially to Dr. Rutherford of Canada.

The first session of this commission was held recently at Buffalo, N. Y. Dr. J. G. Rutherford was selected Chairman, and Dr. M. H. Reynolds Secretary of the commission.

It was soon recognized that this was necessarily a preliminary meeting and should be devoted to a discussion of organization, and plans for work with the members getting acquainted with each other and with each other's views.

It was soon agreed that the commission could not wisely at this stage adopt specific resolutions or recommend specific methods, but a number of general propositions were taken up for consideration, and on some of these the commission reached unanimous understanding.

(1) That general compulsory tuberculin test and slaughter is impractical and should be dropped from further consideration.

(2) That voluntary testing for owners as a general state policy should be retained, provided it be recognized for what it really is—i. e., a very efficient means of public education and as serving somewhat to keep further spread of tuberculosis among domestic animals in check.

(3) It was unanimously agreed, recognizing fully its limitations, that we can and should accept the tuberculin test under certain conditions as a basis of suitable control legislation.

The general problem before the commission i. e., control work, was divided into four sections and assigned to sub-committees on Education and Legislation, Dissemination, Location of Tuberculosis and Disposition of Tubercular Animals.

One of the serious difficulties in the problem was recognized as the indifference of purchasers

of valuable breeding stock who want certain blood lines and are willing to take the tuberculosis in order to get the breeding.

It was recognized that marked changes in public sentiment in most states and provinces must be secured and that this can be expected only as a process of slow development.

In this informal discussion the commission found and recognized the importance of certain doors admitting the sanitarian to the tubercular herd; i. e., (1) by way of the killing floor and local stockyards to the farm; (2) through clinical cases recognized in practice, inspection, or otherwise; (3) tuberculin testing for interstate and export traffic.

Two important general sources of dissemination (not individual infection) were recognized; *first*, the traffic in tuberculous cattle, especially in pure bred stock; and *second*, unpasteurized creamery skimmed milk.

In view of these various considerations it was also agreed that the commission needs the assistance of two more members, one of whom should directly represent American packers and the other should represent American state health officers.

COST OF CITY GOVERNMENTS

THERE WAS A PROGRESSIVE INCREASE EVERYWHERE UNTIL 1907.

WASHINGTON, D. C., March 6th, 1910.

In the United State Census Bureau's special annual report for 1907 on the statistics of 158 of the largest cities, which is in press, it is shown that the per capita running expenses of the government in 148 of the largest cities increased from \$13.36 in 1902 to \$15.91 in 1907. There has been a progressive increase in nearly every department of the government. The per capita increase in the fire department was from \$1.33 to \$1.61; in the health department from \$0.22 to \$0.29; in charities and corrections from \$0.86 to \$1.06; and in education from \$3.85 to \$4.70.

Of special interest in a comparison of the general expenses of the cities are payments for the maintenance of the health department. In several cities the state maintains a dispensary or health bureau, but in most cities nearly all the expense of the care of the public health is borne by the city alone. New York paid \$1,691,560 for the maintenance of its health department, or more than six times as much as any other city. The other cities paying more than \$200,000 for the maintenance of this department were Chicago (\$261,614), Philadelphia (\$253,709), and San Francisco (\$240,198.)

Cities of over 300,000 population with notably

small payments for their health department were Detroit (\$32,987), Milwaukee (\$40,417), and Buffalo (\$44,358). In the smaller cities the large expenditures of Los Angeles and Oakland, California, reflect payments for the suppression of the Bubonic plague.

TYPE OF DRUGLESS HEALERS.

TOLEDO, O., September 9, 1909.

Clerk of the Supreme Court of the State of Ohio, Columbus, Ohio:

Dear Sir—As I am contemplating going to Prof. S. A. Wellmer's School of Suggestive Therapeutics and before doing so I take the privilege of addressing you to know if there School or any phrase of Drugless Healing can be practised in the State of Ohio, and if it is recognised as League and Legetment the same as in the practise of Medicine? please inform me as to Truth of the Same for which I will be Grattull and thankful to you for, and meney money thanks,

Yours,

Truly and Respectfully,

(Signed)

The officers of the section on General Medicine wish to announce that the program for the meeting in May is practically completed. The list embraces sixteen papers, each one of which will prove of great interest to all members of the association who should belong to this section. A prominent professor from New York will give a talk on "Laboratory Diagnosis in the Past Ten Years." One of the professors in the medical department in the University of Michigan will give an interesting talk, these two in the regular program. Professor J. M. Anders of Philadelphia will deliver the oration in medicine. The remainder of the papers, by our own members, embrace a series of topics to which each essayist has given especial attention. It is felt that no member of the Ohio State Medical Association interested in internal medicine can afford to miss any part of the program.

This section will this year inaugurate the plan of registration previously used by other sections. Every physician who wishes to ally himself with the section of General Medicine should register his name at the first meeting.

JOHN DUDLEY DUNHAM, *Chairman*.

WILLARD J. STONE, *Secretary*.

NOTICE TO SECRETARIES.

This year the County Secretaries are notified to send the lists of members and remittances for dues direct to the Treasurer, Dr. James A. Duncan, 1107 Broadway, Toledo.

VIENNA LETTER.

CASSIUS M. SHEPARD, M. D.,
Columbus, O.

The newcomer is well received by the officers and members of the American Medical Association at Kafe Klinik, and every effort is made to make him feel at home, and there is quite an atmosphere which is truly American. One soon finds, however, that there are many cliques, each composed of fellows who have "an ax to grind" in some connection with the association and its politics. For some time a marked rivalry existed between the eye, ear, nose and throat men and the general surgical and internal fellows, for the presidency of the association, which seemed about to rend the association assunder, but it gradually blew over, only to be renewed later on another account. New members mean new votes, hence each clique makes it a business to look after the neophyte. However, much courtesy is shown new men, in order to get them acquainted with the customs and mannerisms, and to assist them in securing such work as desired.

The fees of all courses have been increased during the past twelve months, and the hours and general plans of courses have been more arbitrarily arranged to the satisfaction of the instructors, in spite of the protest of the association. When the association was organized its rules and regulations were made to favor, as far as practicable, the members of the association. Now, the instructors are well organized, and having the best end of the bargain are in a position to dictate. It is this new order of affairs, therefore, that is bringing about some very radical changes in the matter of courses and fees, and the American Medical Association of Vienna is waking up to the fact of the necessity of determined and united action.

The Allgemeines Krankenhaus has very little the appearance of a hospital. It looks more like a barracks of the old type, built when inner courts were necessary for the accommodation and protection of the inmates. It occupies several squares, and has numerous entrances, all of which are guarded by uniformed attendants. Certain gates are open at certain hours, but to gain admittance through one of the gates out of hours you must tip the keeper to the amount of 20 heller (4 cents). Sometimes our medical meetings were held in the Krankenhaus, through the courtesy of one of the professors, who would give us the use of his room provided a liberal fee was paid the diener. The meetings were called for 8:15 p. m., and the gate was closed at 8 p. m., so in order to get in one had to ring the bell and wait until the keeper appeared, carrying a little lantern about the size of a "firefly." He would unlock the gate and get his 20 heller from each one as he passed through, and then retire to his quarters, only to be called by the next man who wished admittance. This would continue until all had been admitted, and the keeper had made on an average a trip to and from his quarters for each two men. At the close of the meeting the whole performance was repeated. Napoleon made the rule that all doors must be closed at a certain time and locked, and the custom still prevails. If you reside in a pension (and most of us do), it will cost 4 cents to

get out after 10 o'clock in the evening, and the same to get in before 7 in the morning. Such a thing as a passkey is unknown. The porter must be rung up between these hours to unlock the door, regardless of which way you are going, and I often wondered when he secured the necessary seven hours' sleep.

By recent comparison of living expenses in Paris, London, New York, Vienna, Berlin, and other centers of learning, Vienna leads by far in high prices. The student cannot find suitable accommodations, with such comforts as the average American has in his own home, for less than \$10 per week. In addition to this he must supply his light and heat, but the average hotel rates will be much more. Pension life is a diversified monotony. It is quite endurable if you find a good pension, with comfortable rooms and good board, and then take most of your meals outside and spend as little time as possible in the pension. Clinics during the day, and theatres and cafes in the evening will enable you to live quite pleasantly in a pension. However, they are excellent places to try your embryonic German, provided you are ambitious and brave.

All of my interests being surgical I drifted to the Surgical Ambulatorii of the Anatomical and Pathological Departments. The Pathological Department, together with the post-mortem rooms, is located in what used to be the old anatomical rooms. Hence when one speaks of the Anatomical Department they mean the Pathological Department as it now exists. Professors Stoerk and Ghon give the two courses in pathology most patronized by Americans. These courses are either in German or English as desired. Gross pathology is more sought after than microscopical, but the courses in each are as a rule quite full, each having twenty places or more.

The Viennese law provides that an autopsy shall be made in all cases of death, if such is deemed necessary by the medical authorities. There is no questioning on the part of relatives and friends. If the patient dies in a hospital the autopsy is often held before the body is seen by the friends. In the hospital, and connected with the anatomical rooms are a number of chapels, and it is not uncommon to see twelve or fifteen funerals held from these chapels in a day. All autopsies are complete. There is nothing exempt but the face, hands and feet. These must remain unmolested. All the rest of the body may be removed, but the face, hands and feet must appear in good condition for the funeral ceremony.

In this connection I might say, it is reported that on the death of an American student in Vienna, a few years ago, an effort was made to have the body brought to America for burial. It was found, however, that a special train would be required, as a corpse is not permitted to be carried on a regular train. This, with the endless amount of red tape, would cost more than \$5000. It was decided, therefore, to bury the body in Austria but when the friends went to secure a grave lot the best that could be obtained was a twenty-year lease, and at the expiration of that twenty years the lot would be resold for burial purposes. The time of the lease having expired the tenant is promptly evicted. This explains why one often hears the remark: "Well, I hope I'll not die in Austria." To be autopsied whether one needs it

or not, and then to be sure of eviction at the end of twenty years, is not conducive to pleasant dreams.

However, there is another side to all this, and it is the one in which we are most interested. In the anatomical rooms, at 8 a. m., the autopsies begin. Here one can have as much practical experience as desired, or the benefit of demonstration. If you desire a private course in post-mortem technique, there is no place outside of Berlin where the facilities are so great. With two or three men, Prof. Stoerk, or Prof. Ghon, will make one autopsy after another, until perhaps a dozen are made, and when they are completed you will have a full summary of the pathology present in each case. Not only this, but you will have all the etiology which, coupled with the hospital history, surgical and medical, will make complicated and puzzling cases plain and easily understood. From these subjects are taken all organs of interest, as well as the bones and soft parts for later demonstration. Microscopical study is given in all cases where there is the least question of diagnosis.

The post-mortem technique is well worked out. It seems that an autopsy could be held with a specified number of knife strokes, and cuts of the scissors, and the estimate would not be missed once in a hundred times. Gross sections of all organs are made according to a regulation, and to deviate therefrom, except in special cases, would be cause for severe criticism. As a rule twelve or fifteen cases are demonstrated before a section, but should some special case appear the whole time might be taken for it alone.

Interesting traumatic cases, such as heart rupture and aneurisms, with now and then a ruptured sigmoid from sigmoidoscope blunders of unskilled hands; cases in which several yards of intestine have been curetted out through a puncture in the uterine wall, and then stuffed back in the vagina to escape blame; these and many others are brought before the classes in the Anatomical Department. Here, too, one sees numerous cases of phosphorus poisoning. They are all the same—the same etiology, the same termination,—and once seen are never to be forgotten. The usual method is to dissolve match heads, and drink the solution. Never a week passed that we did not see from four to five of these cases at autopsy. Drugs and remedies being difficult to secure, all prescriptions being censored, with the Government Catholic and the penalty so severe in cases of abortion, the general use of match heads is appalling. Hundreds of lives go out annually by this route, but up to the present nothing has been devised to remedy the trouble.

With such a wealth of pathological material at hand one may obtain anything and everything for the purpose of research and study. Those interested in the nervous system have every possible opportunity, and all necessary material for specimens and sections. It is well to bear in mind, though, that your own United States will charge you duty on each slide and prepared specimen you may bring home with you. It makes no difference if you do make them yourself from fresh material. Neither does it make any difference how much time and money you may spend in perfecting yourself for the betterment of the profession and the good of the individuals who may come to

you for treatment. While other countries pay their professional men for the time and labor spent in such pursuits, your own will grab its rake-off from your specimens and microscopical slides on your return trip. So, if you become interested in the work, and begin to accumulate a lot of specimens, remember that they may cost you more to get them into America for your own use than they will to prepare. If you are wise you will send them home for "the use of a school or college."

BOOK REVIEWS

PREPARATORY AND AFTER TREATMENT IN OPERATIVE CASES. By Herman A. Haubold, M. D., Clinical Professor in Surgery and Demonstrator of Operative Surgery, New York University and Bellevue Hospital Medical College, New York; Visiting Surgeon Harlem and New York Red Cross Hospitals, New York, etc. With four hundred and twenty-nine illustrations. New York and London: D. Appleton & Co. 1910.

This volume treats in an exhaustive manner the preparatory and after treatment of operative patients. The text is well illustrated, and the author has left very little unsaid in the management of post-operative complications. The work should prove a valuable help to the general practitioner—it will enable him to make efficient preparation for the doing of major operative work in private, and in carrying out the measures indicated in the intelligent after treatment of his patients.

DISEASES OF THE GENITO-URINARY ORGANS AND THE KIDNEY. By Robert H. Greene, M. D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M. D., Assistant Professor of Clinical Medicine, University and Bellevue Hospital Medical School. Octavo of 605 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Co. 1908. Cloth, \$5.00 net; half morocco, \$6.50 net.

This work is the conjoint product of a surgeon and a physician, who have lent equal attention to the medical and surgical aspect of the diseases considered. The greater part of the work is devoted to the urinary, rather than the sexual organs. In the second edition of this work several of the newer, accepted procedures have been incorporated. The illustrations in the chapter on "Cystoscopy" are excellent. The chapters on "The care of urethral instruments; the examination of the urine; blood pressure and examination of the blood in renal disease; tuberculosis of the kidney; surgery of the kidney; diseases of the male urethra; the diagnosis and treatment of diseases of the prostate, and the seminal vesicles" are especially good. Chapter XXX deals with neuroses of the sexual organs. The

volume is beautifully executed, and contains all that represents the latest genito-urinary teaching.

THE PRACTICE OF GYNECOLOGY. New (fourth) edition, thoroughly revised. A Text-Book on the Practice of Gynecology. For Practitioners and Students. By W. Easterly Ashton, M. D., LL.D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Octavo of 1099 pages, with 1058 original line drawings. Philadelphia and London: W. B. Saunders Co. 1909. Cloth, \$6.50 net; half morocco, \$8.00 net.

Ashton's "Practice of Gynecology" is truly a remarkable one-volume work. The alterations and changes in the fourth edition have brought the subject matter up to date.

Among the new matters added to the work, already exhaustive in its scope, should be mentioned: "Indoor Exercise—Its Indication and Practice in the Cure of Constipation." The exercises are illustrated. Emphasis is lent the advantage of dealing with pelvic suppuration by vaginal section. The chapter on "Ectopic Gestation" considers the question of immediate versus deferred operation for intra-abdominal hemorrhage due to tubal abortion or rupture. Changes have been made in the technique of several abdominal operations. The local use of magnesium sulphate is recommended in the treatment of erysipelas of the vulva. The pathology of shock is satisfactorily considered. The Fowler-Murphy method of dealing with the suppurative forms of peritonitis is described in detail. The work is ideal—practical, and the text illustrated with more than 1000 cuts.

PROGRESSIVE MEDICINE—A Quarterly Digest of Advances, Discoveries and Improvements in Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Materia Medica and Therapeutics in Jefferson Medical College of Philadelphia, Pa., assisted by H. R. M. Landis; M. D., Assistant Physician to the Out-patient Medical Department of the Jefferson Medical Department of the Jefferson Medical College. Lea & Febiger: Philadelphia and New York.

"Progressive Medicine" for December 1909 is fully up to its usual standard.

Edsall contributes a most comprehensive article on "Diseases of the Digestive Tract and Allied Organs, the Liver and Pancreas," in which he discusses all the recent advances and reviews the literature in an exhaustive manner.

The second article on "Diseases of the Kidneys" by John Rose Bradford is especially interesting. The discussion of the nature and cause of "Orthostatic Albuminuria" presents some new ideas and suggestions. The value of the X-ray

in the diagnosis of Renal Calculi is presented in a most practical way.

Joseph C. Bloodgood presents a very interesting chapter on "Surgery of the Extremities, Shock, Anesthesia, Infections, Fractures and Dislocation Tumors." The writer reviews the literature of the year in a thorough manner. The article is of more than ordinary value as a ready reference to the surgeon.

"Genito Urinary Diseases" is the subject of Belfield's article. This is a very complete summary of the literature of the year and omits nothing of interest or importance in connection with this subject.

The Therapeutic Referendum, by Landis, is a most careful presentation of therapeutic advances and suggestions of the past year. The author's careful reference to the original article throughout the chapter adds much to its practical value. The chapter represents an enormous amount of reading upon the subject during the past year.

As has been true of former volumes of "Progressive Medicine," this volume is especially valuable to the busy practitioner where time for general reading is limited.

A TEXT-BOOK OF PHYSIOLOGY: FOR MEDICAL STUDENTS AND PHYSICIANS. By William H. Howell, Ph. D., M. D., LL.D., Professor of Physiology, Johns Hopkins University, Baltimore. Third edition, thoroughly revised. Octavo of 998 pages, fully illustrated. Philadelphia and London: W. B. Saunders Co. 1909. Cloth. \$4.00 net; half morocco, \$5.00 net.

The appearance of a new edition of this standard authority shows the determination of the author to keep his book thoroughly abreast of the times. Though but two years have elapsed since the publication of the second edition, there are many changes in the text and the addition of much new material. This work, in the reviewer's opinion, is the best text-book of physiology that has ever been offered to medical student or practitioner.

MEDICAL GYNECOLOGY. By S. Wyllis Bandler, M. D., Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Second revised edition. Octavo of 702 pages, with 150 original illustrations. Philadelphia and London: W. B. Saunders Co. 1909. Cloth, \$5.00 net; half morocco, \$6.50 net.

The appearance of the second edition of this book but one year after the publication of the first edition shows the cordial reception it has received and the demand there is for so excellent a work. The text has been but slightly altered, and there have been a few additions, notable among which are Head's Zones, with their relation to diagnosis.

THE MEDICAL COMPLICATIONS, ACCIDENTS AND SEQUELS OF TYPHOID FEVER AND THE OTHER EXANTHEMATA. By H. A. Hare, M. D., B. Sc., Professor of Therapeutics in the Jefferson Medical College and Physician to the Jefferson College Hospital, Philadelphia, and E. J. G. Beardsley, M. D., L. R. C. P., Philadelphia. With a special chapter on the Mental Disturbances Following Typhoid Fever, by F. X. Dercum, M. D., Professor of Nervous Diseases in the Jefferson Medical College. Second edition, thoroughly revised and much enlarged. Octavo, 398 pages, with 26 engravings and 2 plates. Cloth, \$3.25 net. Lea & Febiger: Philadelphia and New York. 1909.

This work, as the title page and the preface states, deals only with the complications, accidents, and sequels of typhoid fever and the other exanthemata. It is, so far as the reviewer knows, the only book of its kind before the profession and is a resume of the medical literature, combined with the wide experience of the authors on this subject.

Text-books of medicine can touch only briefly upon, or treat under separate headings, the complications and sequellae of a disease, and this book is therefore of greater value to the medical profession, particularly since the complications and sequellae of typhoid are so many and so varied and the disease holds so important a place in the practice of all general practitioners.

The text is clearly and ably written and there are in addition many excellent illustrations. The work as a whole is of great practical value, as well as of scientific interest.

DISEASES OF THE NOSE, THROAT AND EAR, MEDICAL AND SURGICAL. By William Lincoln Balinger, M. D., Professor of Otology, Rhinology and Laryngology, College of Physicians and Surgeons, Department of Medicine, University of Illinois, Chicago. Second Edition, revised and enlarged. 932 pages, illustrated with 491 engravings and 17 plates. Cloth, \$5.50 net. Lea & Febiger, Philadelphia and New York. 1909.

The fact that the first edition of this very comprehensive work was exhausted within one year of its publication is a recommendation far beyond the laudations of a reviewer. With characteristic energy, the author has not been content to issue but a padded reproduction, but has rewritten many portions; added new material both in text and illustration, bringing the subject matter abreast of latest developments. This revision has been so extended that the type of the entire work has been reset.

A noteworthy addition is the description and illustration of the functional tests of the labyrinth and their clinical application. The subjects of the submucous resection of the septum and of

the enucleation of the tonsils have been fully elaborated.

Notwithstanding the magnitude and scope of this work, the individuality of the author is not lost, and the reader feels that the material has been well assimilated before its presentation. Of special value are the considerations given to choice of operation, as are also the minute and lucid descriptions of technique in the performance of the same.

This book stands, today, the best exponent of modern thought and practice in these departments of medicine, whose phenomenal development compels our admiration and respect.

EXAMINATION OF THE URINE: A Manual for Students and Practitioners. By G. A. DeSantos Saxe, M. D., Instructor in Genito-Urinary Surgery, New York Post-Graduate Medical School and Hospital. Second edition, enlarged and reset. 12 mo. of 448 pages, illustrated. Philadelphia and London: W. B. Saunders Co. 1909. Cloth, \$1.75 net.

This little book is well adapted to the needs of the practitioner who wishes a concise and yet complete work on urinary analysis.

The principal tests are given and briefly explained. The chapters on the microscopic examination of the sediment are the more valuable because of the addition of numerous exceptionally clear plates and illustrations.

THE PREVENTION AND TREATMENT OF ABORTION. By Frederick J. Taussig, A. B., M. D. Forty-nine illustrations. C. V. Mosby Co., St. Louis, Mo. 1910.

This is an excellent and practical work for the general practitioner. It thoroughly covers the subject and brings out many points often lacking in our general text-books on obstetrics.

It is well written, profusely illustrated with well-chosen plates, and attractively mounted.

The statistics given in the first chapter, showing the frequency and results of abortion in even modern times, justify the author in taking up the subject.

A HANDBOOK OF SUGGESTIVE THERAPEUTICS, APPLIED HYPNOTISM, PSYCHIC SCIENCE. By Henry S. Munro, M. D., Americus, Georgia. Second edition. C. V. Mosby Medical Book Co., St. Louis, Mo.

The first edition of this work was reviewed in these columns about a year ago. The prompt appearance of a second edition indicates a cordial reception of its predecessor. The author has made some modifications and additions to bring the subject up to date, but in the main it differs but little from the first edition, as might be expected in such a short interval.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.

GONORRHEA: SOME FACTS THE GENERAL PRACTITIONER SHOULD BEAR IN MIND.

Warterfield (*Jour. Okla. State Med. Assoc.*, Dec., '09, p. 195) reviews the shortcomings in the care of specific urethritis as conducted by general practitioners. He rightly points out that if any physician does not care to prepare to deal with any particular disease, or if, esthetically, he is averse to carrying out the treatment for it, he should direct the patient to someone who is both capable and willing to give them proper care. Any physician who treats gonorrheal patients should bear in mind certain facts.

The sexual glands are different from other glands and prolonged or continued inactivity of their procreative function does not militate against their subsequent ability to perform that function. There is, therefore, no necessity for illicit indulgence; no necessity for acquiring specific urethritis.

A correct diagnosis requires a knowledge of the pathological conditions as shown by the use of the microscope, endoscope, and other means of precision, and until this is ascertained no rational or scientific treatment is possible.

Notwithstanding its known biologic characteristics, its virulency and tenacity, the manifestations of the gonococcus are by no means the same in all individuals.

"Many cases of acute urethritis in the female are of short duration and may run their course with little, if any, inconvenience to the patient, and from these mild cases, quite frequently spring the most virulent types of the disease."

"There is no physical or microscopical examination that will positively determine that the infecting organisms are not present in the glands and tissues adjacent to the vagina; consequently, even if repeated examinations of the vaginal discharges and secretions discovered no organisms, the inability to infect could still not be guaranteed."

"There is no one way of treating acute urethritis which can be termed the best treatment in all cases; because the success of any method depends in a large measure on the skill and experience of the physician and the willingness of the patient to follow instructions.

"The consensus of the best opinion is against

any kind of local treatment of an active nature during the very acute stage of the disease; the so-called abortive treatment, even in selected cases, is of doubtful utility; the main reliance for good results in this stage of the disease should be in those agents calculated to do a minimum amount of harm, and yet capable of doing a maximum amount of good; rest in bed, local applications of hot water both for hygienic and therapeutic effect, hot baths unirritating diet, and mildly stimulating diuretics and sedatives are of greatest benefit.

"One of the most potent factors for good, in the treatment of any case of specific urethritis, is to deprive the patient, by means of anaphrodisiac medication, of his power of priapism.

"In from 60 to 80 per cent of cases of urethritis the posterior urethra with the deeper structures become involved; it is the tendency of all cases to become chronic; each case of specific urethritis, like most other diseases is a law unto itself, and should be studied carefully, studied separately and treated individually.

"It is the opinion of some of our best men that many cases of specific urethritis are incurable, and one should not be discouraged if his efforts are not always crowned with success, but press on and remember that it is only the laggard in any vocation who says, 'enough, away with effort.'"

THE DIAGNOSTIC VALUE OF DISTENTION OF THE RENAL PELVIS WITH FLUID.

Freeman (*Col. Med.*, Dec., '09, p. 464) comments on the confusion in diagnosis which sometimes arises in diseases of the kidney, appendix, gall bladder, and uterine appendages. He believes that this confusion is more common than is generally appreciated, especially in chronic cases without the presence of fever. Mistakes in diagnosis referable to the kidney usually occur in instances where there exists an intermittent hydronephrosis, tuberculosis, or stone; the greatest difficulty being in cases of intermittent hydronephrosis where the kidney is not palpable.

"Fortunately a method has lately been suggested by which such mistakes can be avoided in obscure cases. This consists in passing a ureteral catheter up to the kidney by means of a

cystoscope, and dilating the renal pelvis with a solution of salt or boric acid. If the pelvis contains much more than it normally should, a corresponding degree of hydronephrosis must be present; and, in addition, as soon as the pelvis is completely filled, pain is produced, which serves to locate the seat of the trouble, in that it does or does not correspond to that from which the patient has previously suffered.

* * * * *

"It is very satisfactory to note the promptness and accuracy with which patients generally locate the pain produced by a distended renal pelvis. There is no doubt about it, and no suggestions have to be made. They often say, "There! that is just like my old pain"; or, "That hurts me! but it is not like I have always felt before." Sometimes the discomfort is considerable, but it soon wears away, as the kidney empties itself and no harm results."

With excessively nervous or hysterical persons erroneous conclusions might be reached, but this does not often occur. With children many difficulties exist, impossibility of controlling the patient and the unreliability of their statements.

"There is some difference of opinion as to the normal capacity of the renal pelvis; but it can be said with certainty that when it contains over 50 cc. hydronephrosis exists, this being usually accepted as the proper standard. Kelly and others, however, affirm that anything over 7 to 10 cc. indicates a pathologic condition, and the writer has found, in numerous instances, that pain is produced in the normal kidney by the insertion of this amount of fluid. For obvious reasons, however, it is best, for the present at least, to accept this latter dictum with caution.

"The technique of the procedure is simple enough, if one has had some practice with the cystoscope, and is devoid of danger. The end of the catheter must be inserted into the renal pelvis and not simply into the ureter. The solution must be warm and should be slowly injected so as not to cause renal colic prematurely. If the fluid is strongly tinged with methylene-blue, the mouth of the ureter may easily be observed through the cystoscope during the process of injection, so as to make sure that too much of the solution does not escape around the catheter, which, however, is seldom the case.

"In injecting the solution, a syringe may be used with a metal plunger, to facilitate sterilization, and with a small pointed tip that will fit accurately into the ureteral catheter. It should

be of considerable capacity and graduated in cubic centimeters.

* * * * *

"If it were more employed when possible, in many obscure cases of abdominal and renal origin, embarrassing and even fatal mistakes would be avoided."

INFLUENZA.

Egan (Jour. Ind. State Med. Assoc., Nov., '09, p. 468) discusses influenza, its types, complications, and treatment. The disease is a distinct entity and is not to be considered as an aggravated "common cold" or coryza.

"The bacillus is readily distributed and spread; most actively by droplets of mucus. It may be carried by clothing and clings to infected apartments for some time. Even after a patient has recovered from an attack, his nasal secretions may reinfect himself, or other persons, for a period of weeks; therefore, all towels, pillow cases and other articles used by him should be boiled and the room disinfected before being used by others. Another important point is that no immunity is conferred by one attack. On the contrary, one attack seems to predispose to another, so that, with the reappearance of epidemics, one individual may suffer with two, three or more attacks."

The classifications of types are numerous but the most convenient is into respiratory, gastrointestinal, and the nervous and mental types. In the respiratory we have an onset simulating bronchitis, pneumonia, or pleurisy. In cases of this type "a heart dilated as the result of excessive exercise, may succumb readily, or one in which early but hitherto unrecognized degenerative changes were developing, may suddenly fail.

"In the gastrointestinal type the symptoms are mainly those of acute gastritis or ileocolitis, the attack being ushered in by vomiting, diarrhea and possibly with violent pain and collapse. In other cases pain is absent and profuse watery stools are present.

"In the nervous and mental type, the symptoms consist of profound nervous and mental depression, or in severe neuralgic pains which may or may not be due to neuritis. Mental disturbances are by no means rare. The symptoms may develop during the stage of onset, the febrile stage or in convalescence. The prognosis is usually good, unless there is a bad history of heredity. Other more rare conditions developing in this type are meningitis, encephalitis, toxic neuritis and cerebral abscess."

Of the complications there are the usual pulmonary ones among which it is well to remember that old and latent tuberculous lesions are fired up by true influenza.

The cardiac complications occur most in those who already have mild cardio-vascular degenerations, or dilated feeble hearts, or "who persist in remaining at work after the attack begins and refuse to go to bed. These patients not only have cardiac difficulty during the attack, but frequently suffer from cardiac weakness and distress many weeks after convalescence should be well established. The man who persists in remaining out of bed when attacked by this disease literally 'takes his life in his hands.'

* * * * *

"As the disease is highly contagious, it is not only desirable, but necessary, to isolate all cases wherever practicable or possible in private homes, and always in hospitals. * * * The secretions, especially those of the bronchial and nasal passages, should be disinfected. After the attack, the disinfection of the apartments, preferably with formalin gas, should regularly be practiced."

The patient should take "absolute and continuous rest in bed. This is true of mild as of severe cases, and of the patient who is stalwart as of the patient who is feeble. A robust man, who fails to rest, almost always suffers from a severe attack or from sequelæ, which may invalid him for weeks. As the disease produces great prostration, a diet which is easily digestible and highly nutritious is essential for the maintenance of the strength of the patient."

As to the medicinal treatment it is symptomatic, there being no specific. Egan mentions two remedies and cautions with regarding their use. Of the coal-tars, he says:

"Although they give ease, they are harmful if the doses are large, and often fail if they are used in moderate amounts. They tend to increase nervous and circulatory depression, to decrease the ability of the patient to resist the infection from which he is suffering, and the possible secondary infections which may occur. If the patient will rest in bed, they may be used moderately; if he will not rest, they should not be used at all, for they not only do harm directly, but by diminishing discomfort they enable and encourage him to remain out of bed."

And he condemns the continuous use of strychnia because it is a nerve irritant, except where it is used for its stimulation in cases of heart failure or depressed circulation.

METHODS OF REDUCING THE FEVER TEMPERATURE OF CHILDREN WITHOUT THE USE OF DRUGS.

Hallopeter and Mills (Penn. Med. Jour., Dec., '09, p. 197) detail their methods for reducing temperature. The best antipyretic they find to be cold applied either by the ice cap or by sponging.

"The ice bag is placed to the head and the hot-water bag to the feet. This has the effect of equalizing the circulation in the most satisfactory way. Supplement the ice bag and the hot-water bag, if the child's temperature is not reduced in a few hours, by ordering cold sponging. This is done by removing all of the clothing, except the diaper, and placing the child on a blanket and sponging for ten or twenty minutes. This will allay the nervous tension and reduce the temperature, and is more satisfactory than any anodyne. In a fretful or nervous child it is well to commence with water at the temperature of 90° or 95° and sponge the body very carefully. Commence at the face and gradually go down until the whole body has been covered, and then allow a little evaporation.

"The second step is to take a basin containing water at 80° and proceed in the same way as at first, finally using a basin containing water at 70°.

"The exposure may oftentimes be avoided by a compress on the chest or abdomen, and when the child dislikes wet applications it is found well to have, in addition to the ice bag and hot-water bag mentioned, an ice bag to the chest or abdomen, the abdomen being more satisfactory than the chest, with a hot-water bag to the feet."

Colonic irrigation is another very useful procedure. It is best to start with water a little below the temperature of the child.

"If the child has a temperature of 103° the rule is to start with water at the temperature of 95°. This can be continued for ten or fifteen minutes, and you can gradually reduce the temperature of the water from 95° down to 75° or 70°. In this way we not only remove the products of intestinal decomposition, but carry in fluid for the body, and reduce the temperature at the same time. This rectal irrigation may be repeated every three hours, if the indications should warrant it. * * * The apparatus employed for this purpose consists of a soft rubber rectal tube which is inserted from twelve to fourteen inches, and a two-quart fountain syringe, held about three feet above the bed, with normal salt solution as the irrigating fluid, the little patient lying either on its left side on the bed, or, if very

young and weak, lying on its back on the nurse's lap."

(Where the intestine is filled with putrefying material the addition of 3j soda bicarbonate to each quart of water will aid in neutralizing the toxic contents.—Ed.).

In addition to these procedures the room in which the child is should be open to the fresh air regardless of the child's temperature, the only precaution necessary being the avoidance of draughts, which may readily be accomplished by the intelligent use of screens.

And on every nice day regardless of the disease the child may have it is placed in a hammock in the yard. If protected by proper clothing and placed where the sun's rays do not strike them, much benefit is obtained from the few hours in the open.

"One great advantage of the foregoing methods, outside of their effect on the temperature, is the production of many hours of quiet, restful sleep, the sick child in nearly every case going into a good sound sleep after its bath, its irrigation and its stay in the open air. Another important advantage is that the stomach is saved for its natural purpose, nourishment, and we have proved to our satisfaction many times that if the stomach be used for this purpose only, and not upset by the use of drugs, much more nourishment will be taken by the child in twenty-four hours, and just that much stronger will it be at the end of its acute illness, and in proportion just so much quicker will be its convalescence"

RADIUM AS A SPECIFIC IN GIANT CELL SARCOMA.

Under this caption Abbe (Med. Rec., Jan. 2, '10, p. 1) reports eleven cases of sarcoma treated by radium emanations. The method used was to pierce the tumor and introduce the radium tube into the body of the mass where it was left for some hours, according to the judgment of the operator. In some cases two or more applications were necessary. Following the treatments the tumors retrograded and the bones, involved gradually became firm again. Seven of the cases reported involved the jaw. Here complete excision would have been necessary with total loss of one side of the jaw and the usual disfigurement, had the usual operative procedures been used. In the other cases other bones variously located were involved. Of one of these Abbe says:

"The more grave case also of the extensive and highly vascular sternal tumor would have given the patient a fatal hemorrhage if any attempt had been made to remove it, and it, at the best, could not have been extirpated entirely.

"My conviction is that every case of myeloid sarcoma should be given treatment by radium before any operation and that we may expect many cures.

Alcoholic liquors are, to my mind, not only not valuable, but distinctly disadvantageous, in the treatment of disease except in rare instances. On the whole, I have almost given up the use of alcohol, in the treatment of disease. It is rarely, if ever, necessary to give alcohol to children, and usually very undesirable. The teaching in the medical school that I am connected with in regard to alcohol as a food and a stimulant is as follows: I do most of this teaching myself, and I teach that alcohol is not a stimulant in the ordinary technical sense of this term—that it is, on the contrary, usually a depressant in the circumstances in which it is ordinarily used. I teach them that it is unquestionably a food in so far as it yields energy to the economy; but that its toxic effects are usually so undesirable that it is distinctly disadvantageous in most circumstances to attempt to use it as a food.—*Dr. D. L. Edsall, Professor of Therapeutics, University of Pennsylvania, Philadelphia.*

The public generally is too little aware of the injury done to the brain by the slow and insidious action of small doses of alcohol or toxic drugs. I think you would be surprised if you knew how strongly physiologists and specialists on diseases of the mind are opposed to even what is ordinarily called moderation in the use of stimulants like alcohol and tobacco, especially by persons who have a tendency to nervousness or morbid-mindedness. When men like Kraepelin, the head of the best clinic in the world for the study of mental diseases, Gruber, one of Germany's most distinguished professors of hygiene, and Sir Vincent Horsley, England's greatest neurological surgeon, urge total abstinence from alcohol as a most important measure for the preservation of mental health, those of us who have been accustomed to regard so-called moderate drinking more leniently should pause and think."—*Dr. Lewellys F. Barker, Professor of Medicine in Johns Hopkins University.*

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKee, M. D., Callaborator.

A meeting of the Cincinnati Academy of Medicine was held January 17th, 1910. A case of anulous carcinoma of the uterus was reported by F. L. Ratterman and J. Ambrose Johnston, and an "intra-peritoneal exploratory hysterectomy" by B. Merrill Ricketts.

Several cases of strangulated hernia were reported by Charles T. Souther. Case 1—Saw patient Monday morning; had come home Saturday morning previous and was unable to work; had pain in abdomen and severe vomiting; would not consent to consultation at once, but deferred until Monday, at which time I was called and concurred in diagnosis of strangulated hernia. Patient was sent to hospital at once for operation. A strangulated femoral hernia was found; the intestine was black and was considered to be in too bad a condition to stand taxis. The inguinal region was opened into the abdominal cavity and the strangulated loop of gut pulled on from the cavity side and a reduction finally accomplished. The traumatized gut was then delivered through the inguinal region and after applying hot sponges was returned to the cavity.

The femoral sac was simply ligated, and cut away, and the ordinary Bassini operation performed. No drainage. Patient reacted well and vomiting ceased. Stitches were removed on the seventh day, but evidence of suppuration was present.

The incision was opened on the eighth or ninth day and a quantity of colon bacillus pus was evacuated, after which patient improved.

The patient had had a chronic bronchitis for years which aggravated his hernia, and increased in severity from the time of his operation, but was not proven to be tubercular.

The cough and infection in the lung kept up with apparent abscess formation in the lungs. Both hernial openings remained closed despite the cough and lung infection, which finally wore the patient out in a little over three months, at which time he died with abscess of the lung.

The question of what influence the colon bacillus infection had on the bronchitis is an interesting one, and could only have been settled by careful bacteriological study of the sputum.

Case 2—Mr. B., aged 74; large, heavy man, with a history of wearing truss and of previous strangulation of his hernia, which had been re-

duced at that time after three hours' constant taxis.

Patient presented a large inguinal hernia with symptoms of strangulation; as he was old, with a bad heart, and had been advised by numerous doctors never to take an anesthetic, it was with difficulty he was induced to submit to operation, but at 8 P. M. at his home, in presence of Dr. Ricketts, and assisted by Drs. Spargur and Handley, he was operated upon. On opening the sac we found a loop of the large bowel the size of the closed fist filling the sac. The internal ring was enlarged and the gut returned to the cavity, the sac enucleated and the muscles closed after the Bassini method. Convalescence was ideal, primary union complete, and patient is still well after a year since the operation.

Case 3—A case of supposed strangulated hernia. Mrs. W., aged 41, was attended December 5th, 1909, by her doctor, who stated that he used Trendelenberg position and taxis to reduce a rupture the size of an egg. Patient was only partly relieved of her symptoms and a second physician was called on December 10th, who found her with nausea, slight tem., increased pulse, and abdomen beginning to distend and generally tender, with some rigidity. I was asked to see her that same day at 9 P. M., at which time she had been sent to the hospital for operation for strangulated femoral hernia. After examination and consultation with the attending physician, Dr. W. B. Young, it was decided to open at once to relieve the trouble. Deep pressure over Pouparts ligament seemed to pull the mass back into the abdomen and spoke for strangulated omentum or knuckle of bowel. After the patient was anesthetized the small lump in the femoral ring was much less prominent, but pressure over Pouparts still showed the retraction sign.

Vertical incision over femoral ring revealed only slight glandular enlargement and presence of usual fat pad which was exaggerated because patient weighed only 90 pounds and was very thin. I then opened the abdomen and found, first, no hernia, not even an open ring; second, free fluid; third, sub-acute appendicitis with adhesions; fourth, double pustules; and fifth, retroversion with adhesions and thick grayish green flocculi with whole posterior surface of the uterus covered with greenish gray exudate, also many adhesions between the coils of intestine; appendix was simply ligated and removed, tubes and ovaries were removed, adhesions broken up; drain in-

serted in Douglas pouch, coming out through the incision. Convalescence was very smooth, not even a cathartic being needed for the bowels, and at no time did temperature reach 100. Patient left the hospital in seventeen days in excellent condition.

William H. Taylor was given a memorial by the Cincinnati Academy of Medicine at its meeting February 21, 1910. The Committee on Resolutions was: Drs. N. P. Dandridge, Byron Stanton and Magnus Tate. The program was as follows: "Personal History," A. G. Drury; "Dr. Taylor as a Teacher," Mark Millikin of Hamilton; "As a Friend to the Young Man," H. W. Bettman; "As a Consultant," B. P. Good; "As a Colleague and Obstetrician," Byron Stanton; "Reminiscences," M. A. Tate. The addresses were all good and full of feeling. It was the consensus of opinion that Dr. Taylor was a good man. His faithfulness was shown by the following few facts: Physician to the House of Refuge ten years; to the Cincinnati Hospital 36 years; to the Children's Home 45 years; professor to the Miami Medical College for 36 years.

Dr. E. O. Smith reported the following case: Man aged 36, who complained of pain in the right lumbar region, which he said had been giving him pain for the last fifteen years. X-ray showed a shadow in the right kidney. Cystoscopic examination negative, but a few red blood cells were found by the microscope. Operation refused. A year later he returned and another radiograph verified the findings of a year previous. He had tried the lemon juice treatment and the Haarlem oil treatment, and finally consented to an operation, which was done successfully. Recovery was slow, and two days after leaving the hospital he suffered a severe attack of pneumonia and was supposed to have tuberculosis. A few weeks later he presented himself, complaining of a discharge from the lumbar incision. There was considerable urine escaping from a fistula. The following was injected into the fistulous tract: Bismuth subnitrate (arsenic free) 30.00; iodoform 2.00; Petrolatum alba 60.00. A small amount of this paste was injected six times at intervals of four or five days between the injections. At the end of the bismuth paste treatment the fistula closed completely and there has been no discharge of urine from the wound for more than three months. The patient has gained in weight from 116 pounds to 142 pounds and feels perfectly well.

"Hypodermic Medication in Italy" was the subject of a memorandum before the Cincinnati Academy of Medicine by Dr. C. A. L. Reed. In-

vestigations during a recent vacation in Italy lead the doctor to the belief that this means of medication is used to a greater extent and with more success there than in any other country. The achievements of remedies administered in this manner are more definite and excellent than by the mouth. This applies not only to the remedies ordinarily administered hypodermically, but also such as iron, arsenic, mercury, phenic acid and a long list of remedies, though not exclusively yet generally administered by the mouth. The essential feature of the treatment seems to be in the pharmaceutical preparation of the remedies. Whether simple or compound, these are prepared in the form of a solution carefully sterilized, put up in the form of glass tubes, blown shut, each tube with the capacity of a cubic centimetre, containing a single dose. Of the remedies thus administered iron is probably of the foremost importance. It is given in the form of the green citrate as an antichlorotic or antianemic, the dose varying from 0.03 to 0.10, repeated one, two or three times a day, according to the symptoms. The phospho-glycerate and the pyrophosphate are similarly administered. In cases requiring a general tonic with pronounced nerve stimulation a combination of the green citrate of iron, arsenate of soda and strychnia sulphate is given, generally in a single diurnal dose at bed hour. Neurasthenic patients with insomnia generally slept after taking this treatment on retiring. Another popular combination is the green citrate of iron with the sulphate of spartine. The anemias, which are extremely common in Italy, are very successfully treated in this manner. Chlorosis, progressive pernicious anemia, leukemia, Hodgkins' disease, are amenable to this line of treatment. Iodine in the form of Durantes mixture is prescribed as a solvent of adventitious growths and deposits and is extensively used in the treatment of tuberculosis. Metallic iodine held in solution with potassium iodide is also extensively employed as an anti-syphilitic, and especially as a resolvent in cases of granular hypertrophies of specific origin. Iodoform is also employed as an antisyphilitic or anti-tuberculous remedy either singly or combined with eucalyptol. Mercury as an anti-syphilitic is extensively employed in the form of hypodermic medication. The injections are given deep in the gluteal muscles, the dose being repeated at intervals varying from a day to a week, care being taken to avoid pytalism. The other more unusual remedies thus employed embrace stypticin, as a uterine hemostatic; trinitin, as a vaso-dilator, paraldehyde, as a sedative and hypnotic; hydrastine, as a hemostatic; phosphorous in oil, as a

nerve tonic; caffeine, as a cardiac excitant; phenic acid, as an anti-neuralgic; adrenalin, as a vaso-constrictor and hemostatic, and pyoctanin, as an antidiathic. The doctor is sure that this form of medication merits the serious consideration of the medical profession.

At the meeting of the Cincinnati Academy of Medicine February 28, Dr. C. R. Holmes brought up the subject of a home for the Academy in the library of the new City Hospital in process of building. He thought the city ought to do that much for the doctors, considering how much they do and have done for the city's poor. The advantages of the library as a place of meeting in reference to clinical and pathological facilities were gone over. It was decided to bring the matter up at the next meeting of the Academy for discussion. M. A. Tate reported a case of ectopic gestation with operation. J. L. Tuechter read a paper on "The Status Epilepticus." Albert J. Bell read a paper on "Typhoid Fever." E. S. McKee reported a case which he and four others had diagnosed as advanced epithelioma of the cervix and who at the earnest solicitation of her many friends had consulted "Phenomenal Krauss." He put her under the X-ray, made a diagnosis of ovarian neuralgia and guaranteed her a cure in twelve treatments at \$5.00 a treatment, \$60.00 in all, paid in advance. He made no vaginal examination at all. She replied that several doctors had said that she had a cancer of the womb. He insisted that she had no cancer and he would guarantee a cure in twelve treatments.

The Clermont County Medical Society met February 16. William Scott, first on the program, under the title of "Shotgun Shots in Practice," reported a very interesting case of the natural expulsion of an intra-uterine fibroid tumor of the uterus which was about the size of a foetal head. The discussion of this paper was participated in by Drs. Kreider of Cincinnati, Leever of Loveland and Curry of Terrace Park. A paper on "The After-Treatment of Gynecological Procedures" was read by Grear H. Baker of Cincinnati. Dr. Baker covered the ground on a normal case very carefully and fully, and then took up the care of those complications which might arise. The paper was discussed by Drs. Curry, Ricketts, Kreidler, Robert Carothers, Spence, Leever and Scott. The principal point in the discussion centered upon the question of shock following an operation.

The following is the program for the March meetings of the Cincinnati Academy of Medicine: March 7—Section of specialties: "Sexual Impo-

tence in the Male," A. W. Nelson; "Report of a Case of Lichen Ruber Acuminatus," E. H. Shields; discussion, A. Ravogli, E. B. Tauber.

March 14—Surgical section: "The Operative Treatment of Tuberculosis of the Joints," H. J. Whitacre; discussion, C. E. Caldwell, Dudley Palmer.

March 21—Medical section: "The Irregularities of the Heart" (illustrated), J. E. Greiwe; discussion, G. A. Fackler, E. M. Baehr, P. G. Woolley.

March 28—Case reports.

The Brown County Medical Society met in the City Building at Georgetown, O., Wednesday, February 23, and discussed the following papers: "The Financial Side of the Practice of Medicine," Wesley Love; "Nasal Catarrh and Its Treatment," J. N. Ellison; "Hemorrhoids," W. L. Faul.

SECOND DISTRICT

R. H. GRUBE, M. D., Collaborator.

A meeting of the Clark County Medical Society was held in the Commercial Club rooms February 21. The post-graduate course was as follows: "Dysentery," J. E. Studebaker; "Intestinal Obstruction," S. R. Hutchings. A special talk on "Chronic Prostatitis," by Dr. G. F. McKim of Cincinnati O., was given.

The Clark County Medical Society held a post-graduate meeting February 14, the following subjects being discussed: "Acute and Chronic Gastritis," M. V. Patton; "Dilation of Stomach—Gastric and Duodenal Ulcers," O. M. Marquart; "Cancer of Stomach—Neuroses of Stomach," Arthur Dietrick.

A meeting of the Clark County Medical Society was held February 7. H. B. Martin spoke on "Anatomy and Physiology of the Stomach, Small and Large Intestines and Pancreas."

The regular meeting of the Montgomery County Medical Society was held February 18. The program was as follows: "Acne Vulgaris," W. O. Roop; "Quarantine and Disinfection," J. Morton Howell; "Rural Regulation," L. G. Klepinger. C. O. Probst, State Health Officer, opened the discussion.

"Diseases of the Pancreas" was the subject at the meeting of the Clark County Medical Society held February 28. G. W. Evans spoke on "Hemorrhage of the Pancreas, Acute Pancreatitis, Acute Hemorrhagic Pancreatitis, Acute Suppura-

tive Pancreatitis, Gangrenous Pancreatitis." W. B. Patton's subject was "Chronic Pancreatitis, Pancreatic Cysts, Tumors of the Pancreas."

THIRD DISTRICT

A HISTORY OF LOGAN COUNTY MEDICAL SOCIETY.

B. S. LEONARD.

It is known that there was a medical society organized in Logan county, Ohio, about 1850, and was formed by good men, but there is no record of it now at my command. It survived a few years and died from inanition. On the twentieth day of November, 1872, the present society was organized, and Seth W. Fuller was elected president, and W. B. Scharff, vice president, Lyman Dow, secretary and treasurer. Drs. Watson, Leonard and Cretcher, censors. The meetings of this society have been kept up since the organization with a fair attendance, and on the eighth day of June, 1907, there was a joint meeting of the Logan County Society and Champaign County Medical Society, at the home of B. B. Leonard in West Liberty, at which forty-two were present.

The meetings of the society are held the first Thursday in each month and a post-graduate meeting the third Tuesday evening when a clinic is held, papers read and discussions had much to the advantage and improvement of the members.

I will make mention of the early physicians of whom I have had personal knowledge who settled in Logan county. Joseph Canby was a Virginian and a graduate of a Philadelphia medical college. He came to Ohio in 1814 and opened an office in Lebanon and after a successful practice of a few years he came to Logan county and settled on a farm near the present location of Degraff. He managed the farm by proxy and opened an office and soon acquired an extensive practice in the county and far beyond its limits. He was an honorable and high-minded gentleman and well educated. He raised a large family of sons and daughters, all of whom have filled useful positions in society. One son, Hon. Richard Canby, represented the district in the Congress of the United States.

Dr. Elbert settled on a farm in the eastern part of the county early in the thirties, and was very highly esteemed by his neighbors and the settlers of the county. His fine education, good qualifications, Christian character, and kind administrations to the sick, won for him the love and esteem of all who knew him, and he was worthy of all he received. One night while on horseback, going to visit a lady in confinement he was stricken with apoplexy and fell from his horse and died in a few hours. The lady to whom he was going and her babe died on account of his absence. He had a son, Dr. John Elbert, who moved to the territory of Iowa and was the president of the convention that formed the constitution of the new state, and afterwards with others, organized and established the Keokuk Medical College.

B. M. Lord was also a pioneer who settled in Bellefontaine after it was made the county seat. He had the confidence of the people and was at

one time elected treasurer of the county. He died at a good old age, full of honors.

Benjamin J. Brown graduated at the Ohio Medical College in 1824, and settled in Bellefontaine in 1828. He was a quiet and just man of the Quaker faith and soon obtained a good practice. He did the principal surgical practice over the county and was highly esteemed by his professional brethren for amiable gentleness and ethical demeanor and professional attainments. He was an honest and consistent advocate of every moral reform and intellectual improvement. He was at one time president of the Ohio State Medical Society. He was a very benevolent man; he presented to the city of Bellefontaine a piece of land for a park and after his death a beautiful life-size marble statue was erected in its center to perpetuate his memory.

Seth W. Fuller, the Nestor of the profession in Logan county, was a student of Dr. Cotton, of Marietta, Ohio, and of a medical college of Cincinnati in the early thirties, in which Drs. Daniel Drake, Willard Parker, Samuel D. Gross, McDonald and others were professors. Having been trained by these distinguished physicians, he sought a location and came to West Liberty in 1838, and opened an office. Here he succeeded in a remarkable degree and obtained the confidence of all. He was careful, studious, painstaking and industrious; a man courteous to all and of remarkable moral qualifications. In 1856 he moved to Bellefontaine and continued in practice until borne down by the weight of years. He died at the age of ninety-four years in the full possession of his mental faculties.

W. H. Cretcher, a graduate of Ohio Medical College, was a student in the office of B. B. Leonard and settled in Springhills for a few years and then moved to Bellefontaine, and soon acquired a large practice in general medicine and surgery. He was a member of the State Board of Health for one term. He died in early life in the midst of his usefulness.

James Grew settled in Zanesfield in an early day and had an extensive practice for many years. He represented the county in the legislature some years before his retirement from practice. He died at a good old age and is kindly remembered by those of his extensive acquaintances.

James S. Robb also settled and practiced his profession in Zanesfield. While in attendance at a case of confinement and leaning over the bed he suffered a seizure of apoplexy and fell across the bed. He was removed to his home in an unconscious condition; he was paralyzed and died in a few months.

James W. Hamilton came to East Liberty in 1836 and practiced his profession until 1852, when he retired. He was the first physician that settled in that party of the county. During his practice he had eleven students who entered the profession. He represented the county in the legislature in 1859.

C. M. Wanzer was a successful physician of Zanesfield; he too represented the county in the legislature and has now moved to the city of Urbana, where he is actively engaged in professional work.

W. D. Scharff obtained his medical education in the medical college at Louisville, Ky., and came to Bellefontaine about the year 1845, and opened

an office. He became a close and intimate friend of the late Dr. Brown, with whom he had many consultations. These intimate associations were of great advantage to the young Dr. Scharff. He soon obtained a good practice. He was an active member of the county medical society, and often favored it with interesting papers. He was at one time vice president of the Ohio Medical Society. He was for many years examiner for the bureau of pensions.

Thomas L. Wright came to Bellefontaine early in the fifties and took a partnership with the venerable Dr. Lord. He was an active member of the county medical society and often contributed valuable papers. He was a voluminous writer for medical journals. He was an advocate of total abstinence of intoxicants. He made a trip to Europe to advance his knowledge on the subject and after his return he wrote and published a valuable volume on "Inebriety."

P. D. Covington, of Bellefontaine, has been one of the active members of the county medical society since its organization and is still in practice. A few years ago he met with a case of placenta previa with alarming hemorrhage. Labor had not begun. He had the patient moved to a private hospital and at a later period when labor began he hastily performed a Cæsarian section and saved the lives of both mother and child. They are now living monuments of his judgment and skill.

F. M. Galer, of DeGraff, holds a high place in the esteem of a large clientele. By industry and fair dealing he has acquired a fair competency and is about to retire and look after his banking interest. He was a disciple of the much loved R. S. Gilchrist, who died a few years ago.

M. D. Wilson, a graduate of Ann Arbor, came to Bellefontaine in 1852. He was an honorable and just man and a conscientious prescriber. He attained a good practice and the confidence of his fellow citizens. He was patriotic and self-sacrificing, and in the time of the Civil War served as a contract surgeon at Louisville, Ky. He died in 1886 at Bellecenter with diabetic gangrene.

William Thomas settled in Logansville at an early date, where he practiced for a number of years and then moved to Bellefontaine and continued in practice for some years, and then opened a bank. This chance does not happen to many of us. He died in 1875.

J. S. Glasgow practiced his profession and was an assistant surgeon in the 30th Regiment, Ohio Volunteers in the Civil War.

Abram Fulton graduated in the Ohio Medical College in 1840 and opened an office in Rushsylvania, Logan county, in 1841, having chosen to rest for a few months on account of feeble health. Here he practiced for twelve years with marked success. His health seeming to fail, he sought another location and rest. After a year or two he returned to Rushsylvania and resumed practice, and continued there until 1857, when he retired and moved to Bellefontaine, where he resided until his death in 1874. He was an educated gentleman and an honor to the profession he devoutly loved.

Drs. Leedom, Pratt and Edwards opened offices in Quincy more than fifty years ago and have since died; all will be remembered for their good work. N. V. Spence succeeded them. He is a graduate of the Starling Medical College in 1963.

He opened an office in Quincy in 1865, and has been in active practice for forty-five years, but is now about to retire. He has the distinction of having delivered four women of twins and one of single birth, all within eighteen hours. He is a member of the Logan County Medical Society, State Association, and other societies of like character. He stands high with his professional brethren.

Dr. Watson was one of the active members of the profession in Bellefontaine, and although he had the misfortune to lose his leg above the knee, he could get on his horse quicker than any physician in the town. He was very successful in what was called milk sickness in the early settlement of the county. He died some years ago.

J. C. Banning, of Bellecenter, is a graduate of the Miami Medical College in 1871. He took a post-graduate course in New York in 1882, and in hospital in New York in 1892. He has a good practice and commands the respect of a large clientage. He served his country in Company H, 135th Regiment, O. V. I., in the Civil War.

W. S. Philipps graduated at the Columbus Medical College in 1882, and in 1890 and 1891. He is a member of the Logan County Medical Society and State Medical Society, and American Medical Association, and was a professor in Ohio Medical University in 1897 and '98. He has had the honor of being vice president of Ohio Medical Association in 1901, and the president of the Northwestern Ohio Medical Association in 1908.

Benjamin B. Leonard began the study of medicine on the twenty-ninth day of March, 1847, with the reverend Dr. S. W. Fuller in the village of West Liberty, and after graduating from the Medical College of Ohio, he accepted a partnership with his preceptor and continued with him until the ninth day of October, 1854. He has continued in the same town to the present. He became a member of the Ohio State Medical Society in 1854, and of the American Medical Society in 1855. He has been vice president of the Ohio State Medical Society and its president in 1878; president of the Northwestern Medical Association and an honorary member of the Indiana Medical Society, also of the West Virginia Medical Association and of the Alumni Association of Jefferson Medical College. He was surgeon of the 84th Regiment, Ohio Volunteers in the War of the Rebellion. He was sent by Gen. Todd to look after the wounded after the battle of Gettysburg, and by the Surgeon General to care for the wounded after the battle of Chickamauga. He has acquired the reputation of an expert and successful lithotomist. He has now retired, being well along in his eighty-fifth year.

H. C. Rutter is a native of Bellefontaine, and studied medicine in that city. He was very prominent in the profession and was soon chosen as an assistant in the hospital for the insane at Columbus, and afterwards the superintendent. He has the reputation of an expert alienist. He was also superintendent of the Hospital for Epileptics at Gallipolis.

Edwin Pratt received his medical education at Starling Medical College, began the practice of medicine in Bloomcenter, Ohio, in 1850, and continued in active practice for 52 years. He was careful painstaking and industrious, and had the

confidence of a large clientage. He moved to Bellefontaine in 1866 and continued in practice until borne down by the weight of years. He died in 1902 in Bellefontaine, honored and remembered as a faithful physician and friend.

Upon a retrospective view of the profession in Logan county, I think you may be proud of our professional ancestry. The profession in the county has made its way from comparative obscurity to a proud, conspicuous eminence. Although the past generation has acquired an elevated position in the scale of medical improvement and gained a high degree of perfection in the past, yet where can we find a period in which the standard of medical literature has obtained so elevated a position as at the present. When have the mighty powers and giant energies of the medical mind received so great amount of attention and cultivation. Many discoveries have been made in every branch and many prothetic appliances brought into use and when shall discoveries cease or knowledge attain its climax. We have seen the feigned beginnings, the first dawnings our fathers witnessed, who shall behold the consummation? We may never see the science of medicine reach the acme of its glory, and usefulness, but if in the future the same unyielding ambition be nurtured a few short years will speak volumes for its advancement. Then let us each do his work so well and so faithfully that when the messenger comes to require of us an account of our stewardship, we may say with truth, "Lord then deliverest unto me five talents, behold I have gained beside them five talents more." Let us remember our responsibility, and leave no stain on the profession and no shame on its parts.

I wish to speak at this time of the four epidemics of which I have had personal knowledge and of which I have been a close observer. In March, 1848, while I was a student in the office of my preceptor, the late Dr. Fuller, there occurred an epidemic of cerebro-spinal meningitis of an exceedingly severe type. I often went with my preceptor to see his patients and made a note of the objective symptoms of the fearful malady. All who took the disease, except one, were between the ages of six and thirty-five years, and only one had reached that age. As many as fifteen died in the village of West Liberty and the immediate neighborhood. The most of them died within eight or ten days from onset and some within twenty-four hours. Those who died at a later period lingered for many days and usually starved to death. One of these who recovered was demented. The other recovered with their faculties unimpaired.

In 1851 there was a scourge of epidemic dysentery and cholera mixed. This prevailed south and east of West Liberty and no cases north or west. It was very severe, almost every family being affected. Dr. Harris, of Kingscreek, a well informed and reliable physician, informed me that there was one death in every eleven and one-half of the population in the school district. In 1852 this disease prevailed north and west of the village, with but one case south of it.

There was an epidemic of typhoid fever that prevailed throughout the county in 1853 with the following condensed history: Mr. Benedict, who lived near the village of Greenfield in the north-east part of the county, developed the disease and

was attended by Dr. Carr; Benedict died and also Dr. Carr, his physician. Dr. Adams, of East Liberty, attended Dr. Carr and took typhoid fever and died. These cases occurred in June and early in July. In the northern part of the county, in the hamlet of Bellecenter, Dr. Jenkins took typhoid and died. Dr. Carter who attended Dr. Jenkins, took the disease and died. Dr. Brooks, of Huntsville, waited on Dr. Carter and died. He was a brilliant young man who, while seeking to carry the weapons of death from a brother's breast, exposed his own bosom to the fatal dart.

Now to go back to the case of Benedict at Greenfield, we have additional evidence of contagion. Benedict's widow came about the middle of July to reside with her friends four miles west of West Liberty, and had a mild form of typhoid. She stopped with her father and was able to be up a part of each day and visited three families—her brother living a quarter of a mile away and her sister one mile away, and a neighbor nearby. On the twenty-fourth day of July, 1853, the mother and brother were visited by the reverend Dr. Fuller, both of whom died. The father was then taken sick and Dr. Richards treated the case, he afterwards dying. The neighbors also took the disease and died of hemorrhage in less than a week. The young wife of the brother took typhoid, but fortunately recovered. The sister was a sufferer from the same malady but recovered. The disease now spread over the neighborhood and Dr. Fuller and I had forty-one cases in that vicinity. It was my first year in practice and I took an active interest in the cases under guidance of my excellent preceptor. During the fall and winter of 1854-5 I had forty-one additional cases, and took it myself, and am here today as a monument of God's preserving care.

The first case of diphtheria that occurred in Logan county, to the knowledge of the writer, was in the family of a farmer living on the Ludlow road in Monroe township. He was a son of the late Jonathan Yoder, about ten years of age. I saw the case on the twenty-fourth day of January, 1859. The throat and uvula were covered with an exudate resembling the white of a boiled egg. It was a new discovery to me. I scraped off as much of it as I could and swabbed the patches with nitrate of silver, because I knew no better. The case recovered, however. A brother-in-law of Jonathan had been there a few days before. He lived some miles away. On the tenth day of February this brother-in-law took the disease. Dr. Ayers was called to the case. The patient made a slow recovery and on the eighteenth of March drove to Bellefontaine for a load of lumber and got wet, took a relapse and died on the fourth of March. Just across the road from my first case lived a Mr. Hill. His six-year-old son took the disease in a few days after my first case; it was a severe case but he recovered after about two weeks, but a month later took cold and swelled up like the sequella of scarlet fever and died. He had scarlet fever one year before. My third case was a five-year-old girl, a cousin of my first case. I had the venerable Drs. Lord and Brew in consultation. The false membrane dipped in the larynx and she died in a few days. The disease then spread over the county and continued with more or less severity for more than two years. Occasionally outbreaks have occurred

since, but not in the old time fatality, in as much as antitoxine has found favor with physicians. The use of this remedy in Logan county was used by Ben Leonard in May, 1897. The case was an extremely severe one in a girl nine years old, in which the larynx had been invaded to such an extent that her breathing could be heard to the middle of the street. She made a rapid recovery after a free use of this valuable remedy.

FOURTH DISTRICT

L. A. LEVISON, M. D., Collaborator.

A meeting of the Fulton County Medical Society was held February 2. The following program was given: Address by the President, Thomas Blair, Lyons; "Methods of Relieving and Curing Conditions of the Stomach," C. N. Heffron, Metamora; "Movable Kidney," C. L. Hutchins, Delta; "The Therapy of the Biologic Remedies," R. C. Longfellow, Toledo. The papers were all very interesting and well discussed.

At the meeting of the Fulton County Medical Society held March 2 the Secretary was instructed to write the members of the Legislature from Fulton County asking them to vote against the optometry bill. The following program was carried out: "Management of Normal Labor," F. B. D. Waltz of Delta; "Use of the Forceps," G. H. Hartman of Wauseon; "Management of the Puerperium," W. G. Dice of Toledo. The discussion was opened by George W. McGuffin of Pettisville and was participated in by all the members present.

The meetings are held the first Wednesday of each month.

Officers for the year are: President, Thomas Blair of Lyons; Vice President, L. C. Cosgrove of Swanton; Secretary, William H. Maddox of Wauseon; Treasurer, A. B. Lathrop of Swanton.

The approaching meeting of the Ohio State Medical Association at Toledo is attracting an unusual amount of attention, owing to the unusual number of entertainments promised. Every one who is familiar with the activity of the Academy of Medicine of Toledo and Lucas County will understand their promise to make this the most successful meeting ever held in Ohio. Preliminary reports as to the scientific side of the session show an exceptionally good program in all sections. The guests will be men of national and international fame.

Headquarters have been established at the Hotel Secor. The House of Delegates, the councilors and the exhibitors will be provided for here. It is planned to have all sections meet under one

roof, so that it will be convenient to get from one section to another.

The Business Men's Club will be thrown open to members of the association during the meeting, and this centrally located place will undoubtedly form the center of the social part of the session.

Smokers, banquets, automobile rides around the beautiful Maumee belt, luncheons at the Country Club are among the many forms of entertainments offered.

Each of the hospitals will conduct clinics under the general direction of G. M. Todd.

The general meeting of the Academy of Medicine of Toledo and Lucas County was held March 4, at 8 o'clock, in the Auditorium of the Young Men's Christian Association building. Louis Miller, M. D., read a paper on "Extracts from Medical History."

The Academy of Medicine of Toledo and Lucas County met February 25. The program was as follows: "Treatment of Dystocia from Pelvic Disproportion," G. B. Booth; discussion opened by Wm. G. Dice and H. E. Smead. Indications for Caesarean Section," S. D. Foster; discussion opened by J. F. Fox and C. N. Smith.

At the meeting of the Academy of Medicine of Toledo and Lucas County February 28, Louis Miller spoke on "Amyotonia Congenita," the discussion being opened by W. H. Snyder. "The Wasserman Reaction and Its Noguchi Modifications" was the subject treated by Louis A. Levison, the discussion being opened by John G. Keller and R. P. Daniels.

A meeting of the pathological section of the Academy of Medicine of Toledo and Lucas County was held February 11. The program was as follows: "Report of a Case of Brain Tumor, with Post-Mortem Findings," W. H. Snyder, "Carcinoma of the Stomach, with Reports," J. P. Gardiner and H. W. H. Nelles.

FIFTH DISTRICT

H. G. SLOAN, M. D. Collaborator.

The regular meeting of the Lorain County Medical Society was held February 8. The program was as follows: "A Plea for More Attention to Pelvic Disease by the General Practitioner," W. E. Wheatley, Lorain; "Symptoms and Diagnosis of Extra Uterine Gestation," William B. Hubbell, Elyria; "Surgery of the Nose and Throat," George Gill, Elyria.

The Trumbull County Medical Society met Wednesday evening, March 2, at the office of Drs. Sabin and Page, Warren. The program was as follows: "Rhythmical Nystagmus—In Its Relation to Diseases of the Inner Ear and Cerebellum," W. B. Chamberlin of Cleveland; "The County Society," Clyde E. Ford of Cleveland.

The Academy of Medicine of Cleveland held its thirty-seventh regular meeting February 18, 1910. Martin Friedrich read a paper on "Carbon Monoxid Poison."

Nineteen persons died last year in Cleveland from the absorption of gases, two of whom committed suicide and seventeen were asphyxiated accidentally. In no instance was carbon monoxid mentioned on the death certificate, although it is highly probable that all nineteen deaths were caused by it alone. It seems as if the medical profession wanted to ignore this dangerous gas which is constantly present in our smoky atmosphere and a potent factor in the production of disease and death.

We all agree that smoke is detrimental to health, for we know that people are easily overcome by it, especially when it is dense and confined. We also know that in burning buildings persons are frequently suffocated before the fire reaches them. To explain these phenomena, all kinds of reasons are adduced. It is certainly not the finely divided carbon that produces syncope and death, but carbon monoxid which is produced in great abundance by any starting fire. In fact, every whiff of smoke that issues from any fire is impregnated with carbon monoxid. This is the best and most powerful argument for the abatement of the smoke nuisance, for it cannot be denied that a smoky atmosphere contains constantly a deadly poison and sometimes in large quantities. The Union Depot before the skylights were removed was a most unwholesome place. The blacksmith forges of the B. & O. Railway shops, before we enforced devices for the carrying off of the smoke, were a steady danger to every workman. This brings me from the outdoor atmosphere into enclosed spaces.

We had several deaths from asphyxia occurring in houses where gas was used as a fuel. Investigation showed in every instance that the chimneys were clogged up with soot so that the products of combustion could no longer escape. This led me to have all houses investigated in which gas was used. To my astonishment we found over a thousand instances where gas heaters had been installed without any provision whatsoever for carrying off the product of combustion. When I ordered them removed, the firm which had in-

stalled them protested, saying "that there was no need to make any provision for the removal of the products of combustion, as there were none." Everything was consumed by fire and nothing left. In future, houses could be built without chimneys. They went from house to house teaching their new doctrine, and the people believed them readily. We found these new gas heaters even in the houses of the more intelligent people, even in a high school. An institution that employs a chemist among its teachers can surely not plead ignorance, but the chemist had not been consulted. Some of these heating devices were placed in the floors, whence they belched up their gases into the living rooms, store, shop or manufacturing place, whatever it might be. Others occupied the place of a former coal stove. The worst type of all was the movable heater, which could be attached to a gas jet by means of a rubber tube and placed anywhere. The people thought that they were the ideal heating apparatus for small rooms, especially bed rooms. Just imagine a small sleeping room with insufficient air space for its occupant, as they usually are, and place in it a movable gas heater to burn there the whole night, with no provision whatsoever for the removal of the products of combustion. With the windows closed and the gas heater consuming at least six times as much oxygen as six adult persons, the percentage of oxygen in the room will soon sink so low that the sleeper can no longer satisfy his system and that the carbon of the gas can be no longer completely oxidized and of necessity carbon monoxid is formed. Many people have confessed to me that they used to wake up in the morning more dead than alive.

There is nothing perfect in this world, and complete combustion at all times I believe can never be obtained. Every fire will at times produce carbon monoxid, especially when ventilation is poor. An open hearth in an enclosed room, especially when there is not ample provision made for the removal of the products of combustion, is a continual and imminent danger to health. The open gas ranges for cooking which have no provision for flue connection will soon undermine the vitality of everyone who uses them.

We found them, for instance, in bakeshops, where they were used for making fried cakes. As almost all the bakeries are located in basements, where ventilation is naturally poor, these stoves were most dangerous for the workingmen. But they are used also in private families, always without the consent of the gas companies, for they are fully aware of the dangers of an unconnected stove.

Then we have the gas plates which are used

mostly where much ironing is done—for the heating of flat irons, as in laundries and tailoring establishments. But they are also used for cooking and, *horrible dictu*, they even found their way into our schools. Dr. Ford and I lately went to see one of the cooking schools and found along with two large connected gas stoves 25 two-burner gas plates in a room of 11861 cubic feet of air space. Every one of these gas fixtures consumed probably twelve times as much oxygen as an adult person would, so that we had in this room, besides the twenty-five girls and their teacher, the equivalent of 324 more persons to draw from the oxygen of the room. When we figure that there was no more than what would amount to about 34 cubic feet of air to a person, we can easily see that no ventilating system and a simple example of arithmetic shows that under these circumstances neither the girls could supply the demand of their systems for oxygen nor could the carbon of the gas be saturated, and the lowering of vitality on the one side and the formation of carbon monoxid on the other were natural consequences.

Carbon monoxid is not only formed by burning carbon in any insufficient supply of air, it is also formed by reduction when CO_2 is passed over red-hot coal as in our blast furnaces. The chemical equation is: CO_2 plus C equal 2CO .

This transfer of carbon, as it is called, occurs constantly in a blast furnace. As the gases are forced in at the bottom, they meet the red-hot coal and CO is formed. As they ascend in the furnace, they pass through the next layer, which is iron ore. This they help to reduce, and CO_2 is formed. The next layer is again a layer of red-hot coal and again the CO_2 is reduced to CO.

And so it goes on until finally the gases reach the top of the furnace, where they consist of from 25 to 32 per cent of CO. From there the gases are forced down again through the down-comers, pass through the dust collectors, from there through a pipe to the gas washer, and then are returned to the stoves and from the stoves to the blast furnace. It is a continual circulation and a continual change from carbon monoxid to carbon dioxid and vice versa. The pipes which return the gases to the stoves have openings just before they enter the stove for the admission of air. Reversed currents of air throw back an atmosphere which is heavily charged with carbon monoxid. A whiff of it is sufficient to give a severe headache if it does not make one dizzy. Besides, there are always leakages through the furnace walls which consist of a cast iron jacket with a two-foot brick lining, and here and there a copper cooling plate through which cold water passes continually. It is not a rare occurrence that in a

blast furnace a man is overcome by carbon monoxid. The workmen say, "He is gased." When the wind is in the wrong direction, practically all the men are under the influence of this baleful gas and all complain of headaches and dizziness, although they work practically in open air. They all know the cause of their ailments and the places of most danger. Last spring a colored man went up alongside of the furnace to clean the cinders off the roof. This was directly against orders, for the place around the furnace wall is known to be dangerous at all times. He was not half way up when he fell unconscious. The other workmen came to his rescue. Before they got him down seven other men became unconscious—one of them died on the spot.

There are other sources of CO, as lime kilns, the burning of charcoals, etc., but as they are of no practical import for us here in Cleveland, I pass them over.

The action of carbon monoxid upon the human system is now well understood. It has a greater affinity for hemoglobins of the red corpuscles of the blood than oxygen has, and when inhaled, combines with it, forming carboxyhemoglobin, a stable product that does not give oxygen to the tissues. The oxycarbonized corpuscles lose their usefulness for the organisms. They can no longer carry available oxygen nor collect CO_2 to bring it to the lungs for excretion. The deleterious actions of carbon monoxid are therefore two-fold.

It lessens or eventually stops the supply of oxygen and it lessens or eventually stops the excretion of carbon dioxid. The final outcome depends upon the amount of gas present in the air and the length of time one remains in the vitiated atmosphere. Mr. Grehant asserts that one part in five thousand of air will impregnate one-eighth of the red corpuscles and one part in a thousand half of them. Eulenberg and Pakiowsky claim that one per cent, or even one-half per cent, will produce death. What becomes of the oxycarbonized red corpuscles is not exactly known. They are probably all destroyed, which would explain the anemia which always follows poisoning with CO.

The symptoms vary a great deal, according to the amount of gas inhaled. Where massive doses are taken in, as is not infrequent around the blast furnaces, the victim may fall unconscious in a few seconds and die without gaining consciousness after a few spasmodic respiratory movements. The heart stops last. Where small doses are inhaled for a long time, the first symptom is usually a splitting headache. The temples seem to be compressed and noises are heard in the head. Also flashes of light appear before the eyes. Then comes dizziness, the victim staggers,

as if intoxicated, and may suddenly break down, limp as a rag, without power to help himself. The pupils dilate. An agonizing retrosternal pain usually appears just before they lose consciousness. When removed into pure air they revive slowly, waken up in a dazed condition, feel sore all over and are very weak.

Of special interest for the physician are the cases of chronic poisoning with CO where small doses are absorbed at frequent intervals. The Buckeye Lamp Company employs about 700 young women. They work at open fires. Gas is the fuel used and no provision is made for the carrying off of the product of combustion. Two years ago I examined all of them in a cursory way. Every one was anemic. They all looked listless and tired and objected to the opening of windows, although the rooms were much overheated and the atmosphere stifling. They had not enough red blood corpuscles to carry sufficient oxygen to their tissues and produce heat. A much overheated atmosphere that would be intolerable to a healthy person was comfortable to them. It helped to keep up their body temperature. I believe that the cause of a great many cases of anemia is chronic carbon monoxid poisoning. In these cases the treatment is without effect as long as the cause is not removed.

The treatment of carbon monoxid poisoning is almost wholly in the nature of prevention. People who are so much overcome by the gas that they stop breathing usually die without regaining consciousness. When they are brought into pure air before breathing has stopped they have a good chance for recovery. Transfusion of blood has been recommended. It looks rational, but most of the cases in which it has been performed would probably recover without it. The after-effects manifest themselves mostly through the nervous system. Anything may happen from hysterical symptoms to softening of the brain. In my opinion, they are simply the effects of a disturbed nutrition. Where there is a lack of oxygen-carrying power, no tissue is well fed and the nervous tissue, being the most delicate, feels the effects of it the worst.

H. G. Sloan read a paper on "Clinical Observations on Transfusion." The particular uses of transfusion are confined mostly to the treatment of shock, hemorrhage, acute carbon monoxid poisoning and strengthening debilitated patients prior to operation. The danger points in hemorrhage are cerebral anemia, and when a load of blood is infused into the circulation, acute dilatation of the heart. In shock it is a means of absolute cure provided the patient is breathing at the time of

operation. As to technique, he laid stress on gentle handling of the vessels, the non-damaging of intima and the use of warm saline running over the vessels to keep them dilated during the transfusion. He reported several cases of the effect in treatment of shock, hemorrhage and building up debilitated patients.

Dr. M. J. Lichty gave a demonstration of Kraus' Sphygmomanometer and reported a case where the phenomena of slow ventricular beat and double pulsation over the sternal notch was present in the case of acute articular rheumatism two weeks and then the heart beat returned to normal.

The sixty-seventh regular monthly meeting of the Lake County Medical Society was held February 7. The program was as follows: Minutes of last meeting; miscellaneous business; presentation of cases; paper by Henry L. Sanford of Cleveland on "The Significance of Chronic Gonorrhoeal Prostatitis to the General Practitioner."

The regular meeting of the Lorain County Medical Society was held at St. Joseph's Hospital, Lorain O., February 8. The following program was observed: Paper, W. E. Wheatley; "Surgical," Wm. B. Hubbell; "Surgery of the Nose and Throat," George Gill.

The Ashtabula County Medical Society held its fifty-first regular meeting in the rooms of the Ashtabula Business College Tuesday evening, March 1. J. F. Elder of Jefferson read a paper on "The Test Diet—Its Aid in Diagnosis and Treatment," which was discussed by all the members present. C. C. Roller of Ashtabula was elected a member of the society.

The Ashtabula County Medical Society holds its regular meeting in the rooms of the Ashtabula Business College Tuesday evening, February 1. O. A. Dickson read a paper on "Treatment of Pneumonia," which was followed by a general discussion of the subject.

SIXTH DISTRICT

A. J. MARCH, M. D., Collaborator.

The Summit County Medical Society, at its January meeting, installed the newly elected officers, as follows: President, E. A. Weeks; Vice President, H. S. Davidson; Secretary, G. M. Logan; Treasurer, L. J. Wise; Milk Committee (new member), R. H. McKay; Board of Censors (new member), J. H. Weber; Committee on

Health and Legislation (new member), M. D. McDonald; Library Committee (new member), J. H. Sciler; Delcgate, C. E. Held; Committee on State Legislation, J. A. Hulse; Committee on National Legislation, H. C. Theiss.

After the installation of officers, Dr. Lawrence T. Litchfield of Pittsburg read a very interesting and instructive paper on "The Practical Application of the Principles of Immunity."

The society had a very successful year last year, as judged from the following activities: Increase in its membership—now numbering 101 paid-up members—by initiating and carrying into operation measures new to the organization in Summit County, viz.: post-graduate work of physicians, to which representatives of all schools are enlisted as collaborators, and the completion of organization and encouragement of a kindred organization, the "Summit County Health Protective Association," to which all public spirited citizens are invited to become members and expected to aid in the dissemination of influence which cannot but aid in the improvement of local conditions regarding public health and comfort. Very good co-operation and consequently good results have obtained.

The society this year began its work on a good, firm basis, and gives evidence of attacking its work with a considerable amount of energy and enthusiasm. At the February meeting the following program was given: Symposium on hernia, in which the anatomy of the parts affected and the etiology was represented by Dr. Ralph C. Kendig. Dr. Harry S. Davidson read a paper on the "Symptomatology and the Mechanical Treatment," in which he brought to the attention of those present that the reason druggists and all other non-medical men who are incompetent to properly fit or adjust these mechanical devices to the bodies of those having hernia is because the general practitioner does not equip himself to do it and often even encourages charlatanism by referring these cases to men no more skilled in the construction of trusses and not nearly so skilled in the pathological indications as presented by Dr. Asher F. Sippy, and the whole subject was very freely discussed by those present.

The Summit County Society has also had the great pleasure this month of entertaining the meeting of the Union Medical Association of the Sixth Councilor District in Akron on the 8th, at which time the following program was rendered:

"Medical Inspection of School Children," F. W. Gavin, Canton; "Dermoid Cysts of the Mes-

entery," H. M. Yoder, Smithville, O.; "A Clinical Study of Thirty-Two Cases of Arthritis with Reference to the Uric Acid Theory," W. M. McClellan, Ashland, O.; "Impassible Stricture of the Urethra," N. Stone Scott, Cleveland; address of the retiring president, S. P. Wise, Millersburg; "Medical Witness," Hon. R. M. Wanamaker, Akron, Judge of Common Pleas Court; "Cystitis—Diagnosis and Treatment," E. O. Smith, Cincinnati, Professor of Genito-Urinary Surgery, University of Cincinnati; address, "The Diagnosis and Treatment of Gastric and Duodenal Ulcers," B. W. Sippy, Chicago, Professor of Clinical Medicine, Rush Medical College.

At the annual election of officers of the Union Medical Association the following were elected for the ensuing year: President, J. F. Marchand, Canton; Secretary and Treasurer, J. H. Seiler, Akron.

The next regular meeting of the association will be held in Canton in August.

The Richland County Medical Society held a banquet and an enthusiastic meeting at the Southern Hotel, Mansfield, Wednesday evening, January 26. T. Clarke Miller, Councillor of the Sixth District, was the principal invited guest and gave a very interesting talk on "The State Medical Association." He also gave valuable advice upon successfully conducting county society work. The subject for discussion was "The Future of the Richland County Medical Society," which was opened by the President, William E. Loughridge. After a general discussion, a committee was appointed to formulate a plan of work and study to be pursued by the society. Resolutions upon the death of Dr. George Mitchell were read and passed. John H. Lowman of Cleveland was present and gave a very instructive talk.

SEVENTH DISTRICT

S. O. BARKHURST, M. D., Collaborator.

The Tuscarawas County Medical Society met in Canal Dover on February 1. The superintendents, teachers and ministers of Canal Dover and New Philadelphia attended the meeting. About ninety were present.

The following program was carried out at the March meeting: "The Teacher's Influence in the Formation of Physical Ideals," W. R. Hosick; discussion, J. R. Groves. "Influence of Modern School Life on Digestion," J. M. Smith; discussion, C. H. Sawyer. "Care of Sight and Hearing," R. A. Wilson; discussion, P. H. Wagner.

The Belmont County Medical Society met at the Windsor Hotel February 16. The following members and visitors were present: John A. Hobson, Flushing; W. L. Judkins, Barnesville; G. L. Ramsey, Powhatan; P. L. Ring, Shady-side; D. T. Phillips, Bethesda; W. S. Warren, Businessburg; A. W. Divan, Martins Ferry; Drs. Beetham, Clark, Armstrong and McClellan, of Bellaire.

J. R. Parry of Woodsfield was present and gave a demonstration of a splint for the treatment of fracture of the femur. This splint, which has been found worthy of the confidence and trial of the profession, and has been quite extensively used in this part of the state, is the invention of the late Dr. Armstrong of Woodsfield, Hunter Armstrong's father, and Dr. Parry. The society highly appreciated the doctor's visit and demonstration and gave him a hearty vote of thanks.

P. L. Ring, the new president, gave his inaugural address, which consisted principally of a review of the work done by the society in years past and in suggestions for future endeavor. The paper was clear; its suggestions are feasible and had in them a clear call to loyalty, to earnest, patient toil, and a note of hope for better things for the people and for the profession in their combined war against ignorance, prejudice, superstition, degeneracy, disease and death.

The essayist of the day was J. J. Osburn, president of the Ohio County Medical Society of West Virginia. His topic was "Pneumonia." This subject is of universal interest. It is an exceedingly common disease; no age is exempt and its mortality is high. The paper was a classic; it dealt with the management of the disease. The four forms of treatment were each taken up at some length—the abortive, the casual, the medicinal, the symptomatic. Then men had many highly appreciative words for the paper. The subject was generally discussed, and all felt that the meeting had been one of profit and inspiration.

The regular meeting of the Jefferson County Medical Society was held February 8. Clinical cases were discussed by the society, and a case of diphtheria following pneumonia was reported by J. R. Montgomery.

EIGHTH DISTRICT

CHAS. H. HIGGINS, M. D., Collaborator.

The Noble County Medical Society met in regular session at the home of Dr. Neptune on

Thursday, January 13. After reading several valuable papers, the society re-elected the officers of 1909 for 1910. The following were elected to membership: M. S. Lawrence and J. S. Teeters.

At the regular meeting of the Muskingum County Medical Society, held February 9, the following papers were read: "Some Points in the Diagnosis and Treatment of Syphilis," C. M. Rambo; "Rational Dietetics," F. H. Infield. H. T. Sutton reported a case of "Carcinoma of the pylorus, with removal of about half of the stomach and two inches of the duodenum." A gastro-enterostomy was then made, using the Murphy button. The patient has made a good recovery. E. C. Brush has reported a case of haematoma of the ovary, with presentation of specimen. W. A. Melick showed a soft cataract which he had removed complete with the capsule, according to the method of Major Smith of India. J. T. Davis reported a case showing a large darning needle which had been removed from a patient's thigh. G. Wharburton reported a case of gangrene of the lung following a fall and fracture of several ribs.

A Public Health Educational Committee was appointed according to the action taken at the A. M. A. meeting in June. The work will be taken up immediately by this committee.

NINTH DISTRICT

S. P. FETTER, M. D., Collaborator.

The Pike County Medical Society met in regular session at Waverly February 7. J. L. McAllister of Beaver read a very interesting paper on "Croup." All present took an active part in the discussion.

TENTH DISTRICT

FRED FLETCHER, M. D., Collaborator.

At a meeting of the Columbus Academy of Medicine February 7, a paper on "Mild Mercurous Chloride" was read by John Rauschkolb. Discussion, Drs. Carlton, Matson, Deuschle, Goodman and Hugh Baldwin.

Andre Crotti read the report of a case of acute dilation of the stomach which followed a complicated labor. Drawings were presented to explain our present satisfactory understanding of the etiology of acute gastric dilatation, namely, that of mesenteric traction.

The report was discussed by Andrews Rogers.

S. J. Goodman was elected chairman of the local committee of arrangement for the meeting of the Tenth District Medical Association.

The following resolution was read:

Early in December J. F. Conneffe became a member of the expedition sent by Ohio State University to Mexico to make a preliminary study of typhus fever. He returned to Columbus early in January, and died on January 20th, of supposedly typhus fever, contracted while he was studying this disease in Mexico, though there is some question as to the correctness of this diagnosis. He intended eventually to go into research and educational work, and had received a permanent appointment from Ohio State University for the coming year. He was an accurate worker and a competent scientist; his loss is felt keenly by all his colleagues and his many friends.

WHEREAS, Dr. James F. Conneffe, a member of the Columbus Academy of Medicine, lost his life as a result of the sacred discharge of duty while working in the hope of discovering the cause of typhus fever, and subsequently a means of curing this disease; be it

Resolved, That the Columbus Academy of Medicine highly commend this heroic spirit of self-sacrifice, and hereby consecrate to the memory of Dr. Conneffe a tribute of profound gratitude, and extend to the family of the deceased their heartfelt and unlimited sympathy. Furthermore be it

Resolved, That the Columbus Academy of Medicine direct its Secretary to send a copy of these resolutions to the relatives of the deceased, to the Journal of the American Medical Association for publication, and that a copy be spread upon the minutes of the Academy, to become a part of the permanent record.

Signed: C. F. GILLIAM.
G. C. ROWLAND.
E. F. McCAMPBELL.

At a regular meeting of the Academy February 21, the following program was presented: "The Treatment of Burns," by V. A. Dodd; discussion by Drs. W. J. Means, S. J. Goodman and Hugh Baldwin. "The Forcible Correction of Talipes Equino-varus," by A. M. Steinfeld; discussion, C. M. Shepard and W. J. Means. Dr. Steinfeld presented several cases showing the end results in the non-operative treatment of club feet in children. An abstract of the paper follows:

THE FORCIBLE CORRECTION OF TALIPES EQUINO-VARUS.

Inasmuch as this paper is to deal with the forcible correction of Talipes Equino-Varus, the open methods used will not be considered. For the method herein described no originality is claimed by the writer.

The treatment of Talipes Equino-Varus may be divided into three distinct periods, the pre-operative; the operative; and the post-operative.

When the condition is congenital, the treatment should be instituted as early as possible.

Various authorities advise the use of plaster paris or splints for partially correcting the adduction and equinos, but I much prefer the use of the flannel bandage, one and a half inches in width. The reason I do not advocate the use of firmer dressing is the danger of pressure ulcers, from partially correcting this deformity.

Instruct the mother how to apply the flannel bandage which is worn only during the day, and this bandage is applied so that each turn tends to correct the adduction. She is likewise taught how to apply adhesive stripping; this, too, applied in the sense of a correction, all her efforts being in a line to overcome the adduction.

The advantage which the flannel has over the more rigid dressings is that it can be constantly controlled. If plaster paris is used and a partial attempt is made to correct the adduction, the Tibialis Anticus muscle, which in this condition is a super-nator instead of a dorsal flexor, constantly tends to force the foot back into its adducted and supinated position, and the child will cry with pain. The more rigid dressings cannot be allowed to remain longer than from a week to ten days, and if pressure ulcers result, all efforts will come to naught.

If I err in my judgment in the selection of material used in the early treatment, I think I am erring on the side of safety.

The forcible correction of club-foot is best done at the walking age, and I usually prefer to wait until the child has walked for a period of months before operating. If the procedure is undertaken earlier, you will find you will have difficulty in keeping the dressing on, and you lose the influence that the body weight in walking exerts in its tendency to further overcome the deformity. For after the correction, the sooner the child begins to walk the better the results will be. Given then a child at the walking age, the steps in the operation are as follows: The child should be anesthetized, and our first efforts should be made to overcome the adduction. I prefer the use of the wedge, one hand pressing on the heel and the other on the fore-foot.

The force used should be intermittent in character and should be repeated as long as there is any tendency for the foot to assume the adducted position, for I do not believe that there is any danger in over-correction. The danger arises from not carrying the procedure far enough, and that is why children complain of pain after the operation is completed and the effects of the anesthetic have worn off. If they

have subsequent pain, it is the fault of the operator and not of the method.

The equinos and supination should be next corrected, and I usually use the modified board as devised by Schultess for this purpose. The foot is firmly strapped into the appliance and by a forward and backward movement of the upright, the dorsum of the foot is brought into contact with the surface of the leg. The supination is corrected by forcing the foot inward and downward, so that it can readily be placed in a position of exaggerated plantar flexion.

Until this is accomplished, the tendon Achilles should not be divided. The subcutaneous division of this tendon is the last step of the operation and should not be divided early because it is the point of resistance from which to work. When the operation has been properly carried out, the foot should be soft and pliable and no force should be required to bring it to the indifferent position. (And by the indifferent position I mean the position of the normal foot.)

The Dressing.—The dressing of a club foot after the forcible correction is as important as the operation itself, because the foot must be firmly held in its over-corrected position for a period of ten to twelve weeks.

The technique is as follows: Over the small opening made by the tentotome a small piece of sterile gauze is placed and the leg, beginning at the knee, is covered with a rich layer of wadding. Care should be taken to protect the outer edge of the foot and the heel by extra wadding. Over the wadding I apply a firm muslin bandage; every turn of this bandage as applied to the foot is applied in the sense of correction. If correctly applied the foot will assume a position of plantar flexion and be perfectly straight. It should be drawn tightly enough to cut off the circulation for the time being. Over this dressing the plaster paris bandage is applied and the final correction is made before the plaster firmly sets.

Over the dorsum of the foot a small window is cut and all circular turns of the bandage divided and every bit of wadding is removed.

This is done so that the circulation can be controlled. This window is allowed to remain open for a period of twenty-four hours and then closed by means of wadding and adhesive straps. If this window were not closed you would have more or less oedema of the underlying soft parts. The toes must be closely observed, for they are the indicators of the circulation.

In a club-foot dressing all toes should be visible, but the dressing should extend up far enough

so as to protect the greater toe, as all weight-bearing is on the inner surface of the foot. The knee should be freed both anteriorly and posteriorly, so that motions in this joint can be unrestricted. If the correction has been completely done and the dressing properly applied, the child will be comfortable at the end of forty-eight hours.

And if the child has a great deal of pain, it is due to the fact that the entire technique has been faulty. One thing should be constantly borne in mind in treating these cases, and that is that you cannot possibly over-correct, and by that I mean do not be afraid of doing any damage to the foot by this procedure. Swelling is overcome by the firm bandage and the circulation can be controlled by the window in the dressing already described.

After Treatment.—I usually impress upon the minds of the parents that unless they are willing to abide by the rules herein set forth no results will be obtained. It is in this particular you have to have the intelligent co-operation of the mother, for it is upon her that the greater burden of the after treatment falls. After the cast has been worn for a period of ten to twelve weeks and removed, the skin exfoliates rapidly and the foot is very tender for a period of days. I usually apply vaseline or cold cream and use an ordinary gauze bandage to protect the leg against the irritation of a stocking.

This bandage is applied in the sense of a correction and the mother cautioned not to allow the child to walk until its shoe has been properly constructed. This shoe can be obtained from any shoemaker of average intelligence, and here in the city I have instructed the shoemaker at the J. E. Elliott Shoe Co. how to build it. The outer edge of the sole and heel should be raised from one-fourth to one-half inch and there should be no arch construction in it, as the object of this wedge is to further plantar flex the foot, and aided by the body weight in walking, tends to maintain the correction.

After the removal of the dressing, it will at once be seen that there has occurred a marked atrophy of the calf muscles of the leg, and this atrophy is overcome by daily massage, if possible by the mother.

She is shown how to carry on the forcible correction in the after treatment by instructing her to force the inner surface of the foot downward and the outer surface upward, and this must be done daily. Each day she endeavors to teach the child dorsal flexion, for the muscles must be taught to take on this function of dorsal flexion. During the night the child wears a night ap-

paratus and the object of this apparatus is to prevent the foot from assuming a faulty position during sleep.

During the early months of after treatment I instruct the parents to bring the child to the office once every two weeks.

The parents are early informed that I insist upon observing my cases for a long period after the correction, so that any tendency to recurrence can be recognized early and overcome. I have universally found that parents are glad to co-operate and even come from long distances for this observation.

The shoe as described here should be worn over a period of at least five years, and when the procedure is carried out in its minutest details, recurrence is rare.

In the more advanced types of Talipes Equinovarus I prefer the use of the osteoclast and the same detail carried out. In correcting the adduction by means of the osteoclast, the skin and plantar fascia may be torn through. No alarm need be felt if this occur, because this procedure in a way corresponds to the Phelps operation. This has occurred to me quite a number of times, and I simply place a piece of sterile gauze over the opening and proceed as though nothing had occurred. The tear heals by primary union, and I have never seen any ill effects.

Occasionally in the resistant type it may be necessary to do an osteotomy of the astragalus or a supra-malleolar osteotomy of the tibia before the foot can be plantar-flexed.

In the paralytic type of the deformity the forcible correction should always be done before any attempt is made to do any tendon plastic. This subject of tendon plastic in paralytic club-foot is such a vast one that no attempt will be made to discuss it here.

In summing up, I might say that the results obtained are directly in proportion to the care with which small details of the technique are carried out.

This is certainly true of the after treatment. The ideal results are obtained in those cases where the treatment is instituted early, but good results can be obtained by this method even in advanced cases.

NEWS NOTES

The State Association of Secretaries desires to get into vital touch with every county in the state by the 1st of April, on matters pertaining to medical societies. Within the next few weeks you will receive a circular and blank for information. Your reply need not embarrass you,

because no names will be published. Fill it out at once and send it back. If you chance to be an ex-officer, you will confer a great favor if you will hand it to the right doctor at once, before you forget it. If you find it impossible to answer all the questions, answer as many as you can and send it back.—Dr. J. H. Seiler, Akron, Secretary of the State Association of Secretaries.

The Anti-Tuberculosis League of Cleveland, which has for several weeks conducted a public exhibit, has declared war on the public drinking cup. The league intends to see that the common drinking cup in parks, schools and railway trains and stations is abolished.

Dr. R. H. Bishop, Jr., Secretary of the league, has been authorized by the board of directors to place small vending machines of individual paper cups around in public places, under the care of the league. The authorities declare that the public cup is one of the most frequent means of spreading tuberculosis, diphtheria and a dozen other diseases.

Last fall the service board in Dayton abolished the drinking cup in parks. C. O. Probst, Executive Officer of the State Board of Health, is carrying on a campaign throughout the state to the end of prohibiting the common drinking cup by law, as Michigan did on January 1st.

At Kenton, March 5, Judge Wm. P. Henderson of the common pleas court, overruled the motion of Dr. J. J. Boone, who was found guilty of violating the state vital statistics law, for a new trial. Dr. Boone's attorney then gave notice of appeal and it is expected that he will carry the case to the upper courts. But three witnesses were placed on the stand and the trial was completed in one day. The question as to the validity of the law had been raised in the demurrer to the indictment and dismissed by the court in overruling it.

W. B. Saunders Company, the medical publishers of Philadelphia and London, have just issued a new edition—the thirteenth—of their handsome illustrated catalogue. It contains some twenty new books and new editions, and besides numerous black-and-white illustrations, there are two color cuts of special value. We strongly advise every physician to obtain a copy—sent for the asking. It will prove a ready guide to good medical books—books that we all need in our daily work.

Governor Harmon re-appointed Rutherford H. Platt of Columbus to succeed himself as a mem-

ber of the Board of State Charities. He also appointed Dr. H. H. Drysdale, a Cleveland expert on insanity, to succeed Jesse N. Oren of Wilmington on the board. All three men are Republicans. The governor selected Dr. Drysdale because he felt that there should be a physician on the board because its work chiefly has to do with the state hospitals. The terms of the members are for three years, but these appointments will not be for that long a period, as Messrs. Platt and Oren have been holding over since April 22 last.—Ohio State Journal.

WOULD UTILIZE ISOLATION HOSPITAL.

The smallpox hospital at Cincinnati, which was completed eleven months ago, has not been in use because no funds were available for its equipment and maintenance. The city council is to be asked to appropriate from \$20,000 to \$25,000 for equipment of this building, so that it can be utilized as an additional hospital for tuberculosis patients, to accommodate about 100 patients. The present tuberculosis hospital is already filled to its limit.

McGill University announces that the new buildings in process of construction to take the place of those destroyed by fire three years ago are now approaching completion and that the annual convocation for conferring of degrees in medicine will be held therein, on June 6 and 7. The formal opening will thus be made a noteworthy event, as in addition it is planned to have a grand reunion of graduates.

NEUMANN IN CINCINNATI.

Dr. Henrik A. Neumann, professor of diseases of the ear in the University of Vienna, was a guest of Dr. Christian R. Holmes during his stay in Cincinnati. On January 13, Professor Neumann was the guest of Dr. Allen B. Thrasher at a dinner at the Queen City Club, and on January 23 Dr. Holmes gave a buffet supper at his home in Avondale in honor of Professor Neumann.

A Pasteur Institute will be established at the Ohio State University for the treatment of hydrophobia if a measure offered last month by Senator Mooney, carrying \$1,000 appropriation to be used in organizing and equipping the institute for the current year, is passed. It will have \$1,000 annually for operating expenses thereafter. Treatment is to be given for \$25,

to those who are able to pay, and counties are to pay similar fees for indigent persons.

NEW SURGEON GENERAL.

Medical Director Charles F. Stokes was nominated for surgeon general of the navy February 5, to succeed Rear Admiral Presley M. Rixey, who retired voluntarily.

John D. Rockefeller has agreed to build a hospital to cost \$25,000 for the Women's and Children's Medical and Surgical Dispensary, Cleveland, a charitable dispensary which has been maintained by the women physicians of the city for thirty years, on the condition that \$25,000 is raised as an endowment fund.

The German Medical Society of Cleveland met Tuesday, February 1, in the Schofield building. The following program was given: "Observations Upon the Coagulation Time of the Blood in a Case of Phlegmasia Albadolens and Treatment."

REMOVAL ANNOUNCEMENT.

Dr. Starling S. Wilcox has removed from 176 East State St. to 340 State St., East, Columbus, O. Practice limited to diseases and surgery of the genito-urinary system.

Nathaniel P. Dandridge, after a service of thirty-eight years, has resigned his position as surgeon to the Cincinnati Hospital and Horace J. Whitacre has been appointed to fill the vacancy.

S. M. Sherman, Columbus, has been elected president of the State Board of Medical Examination and Registration, and G. H. Matson re-elected secretary.

T. M. Sabin has been elected president and F. K. Smith secretary of the Warren City Hospital.

J. W. Clemmer, Columbus, has been elected health officer, vice S. B. Taylor, resigned.

H. C. Evans, Youngstown, has been appointed surgeon to the Carnegie Steel Company.

Clyde E. Ford, Cleveland, has been appointed superintendent of health.

The Good Samaritan Hospital, Sandusky, will be reopened March 1.

DEATHS

William Henry Taylor died at his home, Cincinnati, Sunday, February 6, 1910. Dr. Taylor was born in Cincinnati in 1836, his father being Caleb Taylor, a merchant and a Quaker. He graduated in the Medical College of Ohio in 1858. He later went abroad to study under Virchow and others. He was a member of the Cincinnati Hospital staff from 1866. He was professor in the Miami Medical College for forty years and for a long time its dean. The Cincinnati Academy of Medicine accorded him an evening two years ago to celebrate the fiftieth anniversary of his entrance into practice. He spent the evening giving his reminiscences. Dr. Taylor was the first president of the American Association of Obstetricians and Gynecologists. He was president of the staff of the Presbyterian Hospital and for forty-four years physician to the Children's Home of Cincinnati. Dr. Taylor was held dear by the alumni of the Miami Medical College, to whom he was familiarly known as "Pap" Taylor. Honest, upright, faithful, beloved and trusted by all. At the time of his death, if we will forget the infirmities of age and a long and severe illness, he was well the first obstetrician in Cincinnati.

G. L. Bowman, University of Wooster, 1878, died at the Lorain Hospital, January 9, from angina pectoris, aged fifty-six.

J. E. Worley, Electric Medical Institute, 1877, died at his home in Washington, January 6, from apoplexy, aged fifty-eight.

R. P. Pelton, Western Reserve 1893; died at his home in Vermillion, January 9, from pneumonia, aged forty-one.

A. C. Moore, Starling Medical College, 1850, died at his home in Wyoming, January 7, aged eighty-three.

C. H. Bogman, Jefferson Medical College, 1871, died at his home in Zanesville, December 6, from heart disease, aged sixty-six.

T. M. Carroll, Cincinnati College of Medicine and Surgery, 1874, died at his home in Springfield, December 7, aged seventy-one.

Frank E. Engleby, Cleveland Medical College, 1893, was killed by a train at his home in Vermillion, January 22, aged forty-five.

R. N. Fulwider, Columbus Medical College, 1881, died at Urbana, January 24, from cardiac disease, aged fifty-five.

S. W. Beckwith, Northwestern-Ohio Medical College, 1884, died at his home in Toledo, November 23, from paralysis, aged forty-four.

Ephraim Luellen, Electric Medical Institute, 1862, died at his home in Westfield, January 13, from cerebral hemorrhage, aged eighty-five.

D. G. Wilder, Cleveland University of Medicine, 1873, died at his home in Cleveland, January 14, from apoplexy, aged sixty-three.

F. S. Hunter, Miami Medical College, 1888, died at his home in Toledo, January 6, aged forty-three.

Eben Behymen, Electric Medical Institute, 1871, died at his home in Mt. Washington, January 24, aged sixty-five.

J. C. Coleman, Electric Medical Institute, 1874, died at his home in New Marshfield, January 24, of heart disease, aged fifty-five.

Instructions Regarding Care of the Tuberculous.—When a tuberculous person vacates a room or a house, either because of removal to another locality or from death, the local health officer should at once disinfect the rooms occupied by the tuberculous person before they are occupied by any other person. He should, moreover, ascertain the change of address of the tuberculous person in case of removal and report the same to the State Board of Health, so that the case may be kept under the supervision of proper health authorities.—Public Health, Lansing, Mich

"For all practical purposes science and empiricism unite in classing alcohol with the more or less dangerous stimulants and narcotics as hasheesh, tobacco, etc., rather than with truly sustaining food-stuffs."—Dr. J. J. Abel, of Johns Hopkins University.

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ORIGINAL ARTICLES

OBSERVATIONS ON MAJOR SMITH'S OPERATION FOR CATARACT.

JOHN W. MILLETTE, M. D.,
Dayton.

[Read before the Ohio State Medical Association.]

Major Smith in a paper on "The Treatment of Immature Cataract," which he read at New London, Ct., July, 1908, briefly describes his method of removing the lens in its capsule. The operation as I am acquainted with it is essentially as there described except in a few minor details of technic and the personality of the operator.

It is briefly as follows: The patient is placed in the recumbent position and prepared as for the capsulotomy method. The surgeon stands at the patient's head. The assistant sits at that side of the patient on which the operation is to be performed. When all are ready, the assistant with the face of his thumb or index finger retracts the lower lid, and with a Noyes elevator in the other hand slightly lifts and retracts the upper lid. The surgeon now makes the incision upward, including quite half of the sclero-corneal circumference, keeping wholly within the cornea. A small iridectomy is made, after which the lids are released.

The assistant now lays aside the Noyes elevator and in its stead takes the large strabismus hook, the end of which he inserts under the upper lid. With the ring and little fingers of that hand in which he holds this instrument he elevates the patient's brow, while with the thumb and first two fingers he lifts the hook in such direction as though lifting the contents from the orbit. The tension, however, should be sufficient only to prevent the possibility of the patient squeezing, and to expose the field of operation.

The patient is instructed to look up, since, from this time on it is the contraction of the inferior rectus muscle which creates most danger to the integrity of the eye.

The operator places the small end of the ophthalmic spud over the left side of the lower third of the cornea and gently presses backward to-

wards the posterior pole of the globe. At the same time with the ball-pointed strabismus hook he makes pressure on the corresponding right side of the cornea. With the spud the pressure is steady and constant. With the hook he makes pressure in the same direction while he draws it backward and forward across the lower third of the cornea in the same arc in which the spud presses.

As the zonula gives way the lens will be seen to present in the gaping wound. The direction of the pressure with the hook is now so changed as to most assist the lens in its exit. As the lens escapes through the wound usually it will be seen to describe an arc so that the posterior or vitreous side of the capsule is delivered outermost. Frequently a few fibers of the upper part of the zonula have not given way and these must be ruptured by delicate manipulation of the hook. The lens in its capsule is then either in the upper cul-de-sac or out on the patient's cheek.

The assistant releases the lids as soon as the lens is delivered. If possible it is desirable to replace the pillars of the iris, however it is at this point in the operation that Major Smith says it is advisable to let well enough alone. Both eyes are now closed and bandaged, and the patient is put to bed. Except there should be some special indication the bandage is not removed earlier than the fourth day. Not all lenses, however, are delivered exactly according to rule, and the deviations from exact routine make the study of the variations in technique extremely interesting. I shall not attempt a discussion of this phase of the operation in this paper.

I. The instruments used in controlling the lids and in delivering the lens are unique and admirably adapted. The large round-pointed strabismus hook used to control the upper lid by breaking the action of the orbicularis palpebrarum practically eliminates the possibility of the patient squeezing, and by lifting the lid away from the globe exposes a much larger field for operation than would be possible with the ordinary speculum. The view of this field of operation which the operator gets depends on the size of the

palpebral fissure, the elasticity of the lid, and particularly the assistant's skill. It is in the use of this hook that the necessity for a trained assistant is most pronounced. Experience has taught me that the assistant should keep in mind constantly three things; first, prevent the patient from squeezing, using as little force as possible; second, expose to the operator's view as large a field of operation as possible; third, avoid interfering in any way with the operator or his instruments. I have seen a prominent oculist when acting as an assistant so far forget his function that the almost delivered lens was caught between his hook and the delivering hook with the result that the capsule was ruptured and partly retained. Major Smith says a trained assistant is almost as important as the operator himself. This fact is one of the serious objections to the universal adoption of this method of operating.

The combined spud and flat spoon aside from its use in a regular delivery of the lens is quite useful when vitreous presents. At times the zonula gives way in its superior attachments about the same moment that it gives way under the spud, and vitreous may present or even a tear be lost. It then may become unwise to continue further pressure, but by inserting the spud through the incision and insinuating it behind the capsule until the end is approximately just behind the posterior pole of the lens, with the angle of the hook pressing on the cornea the lens may be made to slide up and out. This is done sometimes without any loss of vitreous, the spud seeming to slip in between the posterior capsule and the retaining membrane of the vitreous. This instrument is an exceedingly useful addition to the armamentarium of the ophthalmic surgeon, whether he be doing a Smith or any other form of operation for cataract.

II. The violence to the cornea is much greater than in the capsulotomy method. The incision being fully one-half the circumference of the cornea is much larger. This is necessary because of the size of the body whose exit is desired. The nutrition of the flap thus made is more greatly interfered with. There is also a greater probability of increased astigmatism. However, it is the violation of all teaching and theory in regard to the delicacy of the corneal epithelium which causes most men, as they see the operation for the first few times, to stand aghast at the daring and seeming foolhardiness of the operator as he rubs and presses on the cornea. And yet in my acquaintance with over a hundred of these operations I have seen keratitis occur but a very few times, and then it always cleared up in a short time and has never interfered with the visual re-

sults. While this seemingly extreme traumatism is in direct violation of all our theory, we should remember with Oliver Wendell Holmes: "When facts are numerous and unmistakable and unequivocal in their significance, theory must follow them as best it may."

III. Of the operation by the capsulotomy method, Professor Fuchs says, "It often happens, even in cases in which the operation has been well performed, that the result of the operation is impaired by the *retention of portions of the cataract*. This happens particularly when the operation is done on immature cataracts, but by no means fails to occur also in those that are mature and hypermature. If the anterior capsule is thoroughly opened, the portions of lens left behind grow opaque, swell up, and become absorbed. In this case, therefore, a pure black pupil is ultimately obtained. But if the layers of the capsule become agglutinated early and shut off the remains of lens substance from the aqueous, these remains are not absorbed but persist as a white membranous opacity. If this is present in only one part of the pupil, while another part of it is quite clear, the sight may be perfect. But if the whole pupil is filled by the secondary cataract, the sight is diminished in proportion to the density of the opacity. It may also happen that the after-cataract does not develop until later on; the epithelium of the anterior capsule which has been left behind proliferating and inducing a secondary thickening and opacity in the latter. Similarly the capsule, even without becoming opaque, may induce diminution in sight, if in the course of time it becomes more and more wrinkled and thus causes irregular refraction of the rays of light."

That there can be no retention of lens substance, no proliferation of the epithelium of the anterior capsule, and no future wrinkling of the retained capsule in Major Smith's operation needs only to be stated, since the entire lens substance in the entire capsule is expressed at once. Secondary cataract is thus made impossible, and the capsule permanently disposed of, and no secondary operation becomes necessary.

IV. Vitreous loss. It is here that all men hesitate. Is it dangerous? What quantity, if any, may be lost without danger? What is the future of an eye which has lost a portion? And many questions of a similar character may be and are asked. Men theorize about hemorrhage and detachment of the retina and show what statistics are available, but our knowledge is as yet quite meager, and I believe until further proof is adduced, we must hold ourselves agnostic. If we are to accept the statements of Pagenstecher and of Major Smith as conclusive we may regard the

loss of one-third as harmless. That the loss of vitreous in this operation is much more imminent than in the capsulotomy method is very evident. In those cases with which I am acquainted the loss has been 13 percent, while in a similar number of cases of the same character and under like conditions by the capsulotomy method it has been $1\frac{1}{2}$ percent. That it requires a very much greater degree of skill to avoid loss of vitreous by this method cannot be denied. It is the exquisite skill which his unequalled experience has produced that is Major Smith's safeguard in this matter, and has given him a percentage of loss less even than that given in Ring's statistics, which shows 7.23 percent in a total of 1032 capsulotomy operations by several of the best operators of Europe and America. Vitreous loss may be serious, even dangerous, but so far as I have observed even the loss of one-third has in no case shown evil results.

V. The cosmetic effect is not nearly so good as by the successful simple method, nor even the usual combined method. It is not the rule to get the hoped-for keyhole pupil, ordinarily it is more nearly U-shaped with a rather broad top. The pupil, however, is not so unsightly as some have anticipated. The edges are not ragged. There is practically no incarceration nor entanglement of iris. And what is always most pleasing to the operator there is immediately a clear black pupil absolutely free from debris of any kind whatsoever. "Tis a consummation devoutly to be wished."

VI. Post-operative complications are quite rare. Glaucoma has not occurred. I have not seen iritis occur except when the capsule has ruptured and capsule or cortical debris has been retained. Keratitis sometimes is manifested and follows an unusually lengthy effort to express the lens.

The conjunctiva is always more or less congested, the degrees varying from very mild to quite intense.

One of the gratifying post-operative features both to the patient and to the operator is the entire absence of pain. I have heard twenty-five or thirty of these patients testify in an afternoon that there had been absolutely no pain from the time of operation until declared cured.

VII. Last and most important of all is vision. The one object to be obtained by any operation for the removal of cataract is improved vision. And that operation which shows the best results should be the operation of choice. Major Smith's statistics presented such admirable results that their accuracy was somewhat questioned. My acquaintance with an equal number of cases of the

same character, operated by the Smith method and by the capsulotomy method by the same operator under the same conditions, shows a much better average vision by the Smith than by the capsulotomy method.

In so far as it has been my privilege to observe this operation and its results, in nearly all operable cases of mature and hypermature and certainly all cases of adult immature cataract, it is the operation of choice. It has its unfavorable side, both practically and theoretically. It requires a trained assistant. It demands a greater degree of skill. There is no question but that there is greater violence done the eye. Loss of vitreous must be accounted for. And a less slightly pupil follows. However, over against this are four considerations to which we must give their deserved supremacy, namely, permanent disposition of the capsule and contents; no secondary operation necessary; post-operative complications practically nil; and *better vision*.

But to know more fully of its good and bad qualities and to know if it be generally practicable, we must have the results of more operators, carefully and without prejudice, recorded. The pioneer work being done by Dr. Greene should be emulated by other men who have large clinical facilities. We want to know the best, for the best that is possible, probably always will fall far short of what the conscientious oculist would have for his patient.

This paper is based on my acquaintance with the work being done in Dr. D. W. Greene's clinic at the National Military Home, and at St. Elizabeth's Hospital, both at Dayton, Ohio.

DISCUSSION.

D. W. Greene of Dayton demonstrated the steps of the Smith cataract operation; his remarks and Dr. Millette's paper were discussed together, as follows:

Frank Allport, Chicago: Mr. Chairman—I have not much to say on this subject and would not make any remarks if I had not been called upon through the courtesy of the chair. As a rule, I am of the impression that a man who has not performed a certain operation should not have much to say about it. I have never made a Smith operation, and it is not being performed much in Chicago and I am, therefore, not very familiar with its technique. I think we will all have to come to Ohio to see this work done. Dr. Greene has established a sort of Major Smith "Colony" at Dayton and as long as we can have the privilege of seeing Dr. Greene operate, most of us do not feel the necessity of taking the long trip to India in order to see the work performed by Major Smith. Now, gentlemen, I do not like to throw any cold water upon the enthusiasm of this meeting. What has been said here has almost inspired me to go home and experiment with this

operation But a cataract operation is, of course, a most important surgical procedure, as it means either sight or blindness to the patient, be he rich or be he poor, and I would hate to produce blindness upon even a poor man because of enthusiasm over a certain projected operative procedure. The question which has presented itself to my mind is this: How can we accomplish the greatest good to the greatest number of people? Will it be accomplished by the Smith operation or by the old procedure? One very important thing in reviewing this subject is the personality of the operator, as well as the extent and volume of his experience. I believe this procedure to be perfectly safe in the hands of Major Smith, who performs thousands of operations every year. I believe it also to be safe in the hands of Dr. Greene, who has more material to draw from than most of us, but how about its safety in the hands of Drs. Jones, Brown and Johnson, men who have had little experience and who have had few cataract cases a year? What I greatly fear is that the enthusiasm over this operation, which is at present quite general, may lead men of inferior surgical skill, lack of experience and paucity of material to experiment with this operation, as such experimentation will inevitably be accompanied by the loss of many eyes and the wreckage of many hopes. Both Major Smith and Dr. Greene say without hesitation that the operation requires considerably more skill and experience than the old operation, and if this is true, and it undoubtedly is, I hate to think of the consequences. No one should undertake this operation who is not a good operator, who has not done a great deal of work and who has not a large volume of cases upon which to draw, in order to perfect himself in the necessary technique. Major Smith has acquired his skill through an enormous experience, an experience which seems incredible to the ordinary man. Dr. Greene has also become skillful because he has had an opportunity of operating upon a large number of cases. I would be perfectly willing to have Major Smith or Dr. Greene operate upon my eye if I were unfortunate enough to have cataract, but I would not be willing to submit my eye to the Smith operation to many operators. Not many of us operate upon enough cataract cases a year to become skillful in the use of the Smith operation. Take myself, for instance. I have an average practice and am sure that I do not exceed twenty-five senile cataract cases a year. I would not say that I operate upon even that many. In our office, including Dr. Wood, myself and others, I doubt if we make seventy-five senile cataract operations a year. It does not seem to me that a limited number of cases like this is sufficient to warrant a man in departing from the old well-trodden and reasonably satisfactory path upon which we have safely walked for years.

Another point that I wish to dwell upon is the remark which Dr. Greene has made that it is necessary, absolutely necessary, that the patient should continually look upward all the time during the proposed operation. If he looks downward and allows the inferior rectus to exercise its function, he regards the issue of the operation as most dangerous. It seems to me that the success of the operation must hang upon a very fragile cord if this is true, because, in my experi-

ence, while most patients will do as they are directed, many patients, through nervousness, fright, confusion, etc., steadily refuse to look where they are told, and if the constant upward glance is essential to the success of the operation, it seems to me that many eyes must be lost from this point alone.

Now this is about all I have to say on this subject. I do not wish to throw cold water on this meeting. The papers have been most interesting upon this topic. The discussions also have been most illuminating. Dr. Green's demonstrations have been most practical and comprehensive and I have enjoyed the session, but I think it is well to sound a note of warning so that this operation will not fall into the hands of unsuitable operators.

S. C. Ayres, Cincinnati: I want to say just a word. I have seen Dr. Green perform this operation, and it is simply marvellous to see the lens walk out of this opening he has made. I am sure that when statistics are collected, as they will be in the course of a few years, that they will prove that this is the operation of choice. The statistics of the present time are not complete, but I am sure future statistics will favor this operation.

Albert Rufus Baker, Cleveland: My experience is not sufficient to speak authoritatively on this subject, although I have seen Dr. Greene make a number of the Smith operations. I have made seven. The first one I was unfortunate enough to have an escape of vitreous following the incision, and was obliged to deliver the lens with the scoop. The lens was delivered in its capsule, and although the patient became wildly delirious the night following the operation, and continued so for several days, tearing off the bandages as fast as they could be put on, the healing was perfect and the results satisfactory in every way. The other six extractions were all smooth and it would seem to me particularly satisfactory in three cases of immature cataract. One of these, a man of thirty-two years of age, with a congenital cataract, who had never been able to learn to read, has entered night school since the operation and is learning to do so. The last operation I made was perfectly smooth, but when I took off the bandages there was prolapse of the iris in both angles of the wound. Although the vision is good, the pupil is drawn up to the upper third of the cornea and looks badly. The reaction after the operation I think has been rather more than my cases with Von Graefe operation. I think the conjunctiva has remained pink longer. That does not seem to be in accordance with Dr. Greene's experience. From my small experience, I can say that the operation, although difficult, can be performed successfully by an unskilled operator like myself, yet I am not quite ready to say that it will be the operation of choice except in immature cataracts.

Mark D. Stevenson, Akron: I learned much concerning this operation during some visits made to Dr. Greene last summer. I wish to emphasize the importance of a large corneal incision—fully the upper half. I do not like a conjunctival flap in this operation, especially toward the sides. A small one at the summit of the corneal flap may

cause no trouble and may be useful. After making the corneal incision and performing an iridectomy, the assistant stands at the head, and I stand at the side of the patient. By removing the capsule with the lens there is not only no necessity for future discussion, but the troublesome capsular fragments which in other operations lie in the wound and prevent healing, causing iritis, etc., are not present. There is no swollen ring or cortex pressing against the iris like in the other operations. I had never heard Dr. Greene state before that the lens often turned over in its exit from the eye. The first time it occurred to me I thought it an accident, but it was such a successful operation without loss of any vitreous that I decided in the future to try to make the lens turn over. First I rub the cornea with the end of the hook a little above the lower border and parallel to it, gradually widening my arc until the lower part of the zonula is considerably depressed. I rub on the margin of the cornea and even on the sclera, pushing it behind the edge of the lens which has been displaced not only backward, but, because of its slanting surface, upward. As soon as the lower edge of the lens is in front of the crease pressed into the cornea by the hook, the hook is gradually swept upward and the lens inverted with much less chance of vitreous loss than if the lens had been pressed directly out of the eye. In this day the lens comes first and the corneal opening is blocked until it passes.

D. T. Vail: Dr. Millette sent me a copy of the paper he has just read, a few days ago, and I read it over carefully. It contains a frank and honest opinion of the comparative advantages and disadvantages of the Smith operation and contains no statement that needs to be challenged at the present time. He writes from the standpoint of a skilled assistant, for I have seen him assist Dr. Greene in over a dozen of these operations and can vouch for his expertness in this capacity. And as an assistant he stands in a position to judge the operation and its merits on a plane a little nearer to the truth, if possible, than the operator himself, especially as he has every opportunity of observing the after course of the cases operated upon and makes the final tests of vision. Therefore, he comes before us, the main and most important witness in the case on trial and his evidence we find is unprejudiced and fair. He has expatiated on the advantages and disadvantages of the Smith operation, laying bare, as it were, the whole matter so that you can fairly judge the place this recent operation occupies as a surgical procedure.

If I have any criticism of his paper to offer, it is that he has not dwelt sufficiently on the one great place which this operation occupies to the exclusion of every other method yet devised, viz.: for immature cataracts. It may be a debatable question in the minds of many expert and conservative operators today whether the Smith operation is the one of choice in cases of mature, ripe cataract; but I think everyone who has had experience with the immature and never-ripening forms, which show no material progress from one year's end to another, will at once agree that this is the operation of election.

H. Knapp, in his "report and remarks on a fourth and fifth hundred cataract extractions ac-

cording to Von Graefe's method" (vid. *Archiv. Ophthalmol.*, Vol. vi). writes of his experience with dealing with immature cataracts as follows: I quote this as it echoes the opinion of all who have undertaken the extraction of nuclear or immature cataract:

"The table shows that the immature cataract yields surprisingly unfavorable results, nearly as unfavorable as the complicated cataracts. This shows the great responsibility the operator takes on himself when by inattention, indifference, weakness or professional jealousy, he is led to extract an immature cataract. I make it a rule not to operate as long as, on ophthalmoscopic examination, the fundus yields a red reflex, however faint it may be; furthermore, as long as the patient is able to count fingers after dilation of the pupil and as long as by oblique illumination, in combination with a magnifying glass of great aperture, it can be ascertained that a part of the corticalis is still transparent. In such cataracts the semi-transparent portions of the cortex adhere so tenaciously to the capsule that the most judicious and persevering efforts may fail to remove them. It is sometimes exceedingly difficult to withstand the entreaties of the patients who have traveled hundreds and thousands of miles. They see hardly enough to walk about alone and the operator, instead of telling them to go home again and wait till the cataracts are fully mature, is apt to listen and yield to their entreaties to operate, at least on one eye. The result of such a proceeding is seen in the second horizontal column of the foregoing table." This table referred to had 85.7% unfavorable accidents, "at the head of which was the leaving of a greater or less quantity of cortical substance in the eye." 57% of them obtained good vision, 14% moderately good vision, and 29% were failures.

Now compare, if you will, these results with those reported by Dr. Greene and Dr. Millette, of Dayton, on their first 100 cases operated by methods they call those of Major Smith. Perhaps 75% were immature, and you will be convinced that so far as results in immature cases go, this operation is in a class by itself. In the next hundred cases their results will be even better, for expertness and experience will bring their reward. Think what it means to an able-bodied man of say 65 years of age who is incapacitated on account of immature cataracts, who probably argues that by the mercy of God he may yet live ten years and he wants his sight. He is, however, denied an operation because he must wait until his lenses are ripe. This may mean five years or longer; perhaps he may die of discouragement and old age while waiting.

I think the rule laid down by Dr. Greene should guide us in these cases. viz.: "When the vision at best falls to 20/100, operate, and do it by the Smith method." The day when cataract patients must wait until they are totally blind before they can safely have an operation is past. Major Smith has furnished a method of removing unripe cataracts which will make it the rule to advise operation before total blindness sets in.

Dr. Clark, Columbus: I had the good fortune to see four cases at the hospital in Dayton who had been operated upon by Dr. Greene. Three of them offered marked resistance, the lens being

slow to yield to the pressure, but Dr. Green tells me today that the results are all good.

One of these cases was quite a typical one of immature, nuclear cataract. About five years ago a man had applied to me, suffering with nuclear cataract. He was young and was still able to do some work after I had performed an iridectomy on each eye. In the early part of this year he applied again at St. Francis Hospital, as his vision was failing, but I was away, and he went to another hospital where a surgeon attempted to remove the immature cataract, with a bad result. The man came back to me some months afterward with glaucoma in the operated eye. There was a large mass in the space formerly occupied by the lens, presenting the appearance of lens substance or exudate stained with blood. It looked as though the eye would have to be removed; under treatment the inflammatory and glaucomatous symptoms subsided and he left the hospital and went to work near Springfield, Ohio. He had not worked long, however, when suddenly he was again attacked with pain. He went to Dr. Greene's hospital, and the doctor invited me over to see him operate by the Smith method on the other eye. The operation was a success and in a short time he had good vision. I do not know that it is necessary to say anything more in favor of this operation, either for mature or immature cataract. It leaves an admirably clear pupil and a perfect condition of the vitreous and fundus. Even though when first seen this operation, with the large section and appearance of great traumatism to the cornea, does strike you as something tremendous, its results are such that it is our duty to learn all we can of it, and if we do not like to venture on our patients, we can at least try it on a dog.

When you have seen the operation performed by another surgeon much of the technique can be learned by practicing on a good-sized dog.

Dr. Bonner, Dayton: This operation cannot be properly done by one who has merely read a description of it. You may make a pen picture of anything, I do not care what it is, that is a little bit complicated, and let a couple of artists put it on paper and the two pictures will not look alike because each one has left out some of the details, and it is the details that make the picture. There is the same difficulty in doing this operation after simply reading of it without having seen it done.

The more times one sees it properly done the better he will like the operation. I confess myself that after Dr. Greene's first operation I felt, as he did, that it would never be successful, and I did not believe in it. But after he came back from New York and began to perform the operation as he had seen Major Smith do it, having learned certain details that he did not know before, the operation promised a great deal more, and he has been decidedly successful ever since.

There was one point that Dr. Millette spoke of that is especially important, that Dr. Greene did not emphasize, and that is the influence of the inferior rectus muscles. In the ordinary operation you have the patient look down, but your patient must not look down in the Smith method. He must have his eye fixed straight ahead, not down,

for the action of the inferior rectus is to make the large corneal section gape open and thus increase the danger of losing vitreous. This influence of the inferior rectus was shown, happily in this case, in an extraction by the Smith method that I did last week. In some way the edge of the cornea was turned in after the expulsion of the lens. Just as I started to replace it the patient turned the eye a little down and the cornea immediately assumed its normal position.

In regard to unwarranted corneal violence. In the first place that is similar to the objections offered when some other traditional ideas are attacked. A great many of us accept certain traditions without proving them, and when they are attacked, instead of remembering that it is a tradition that is attacked, we think the facts themselves are attacked, which is a very different matter. In the ordinary accident cases that come to us we often see superficial traumatism that is quite severe, and we all know that unless infection takes place there is prompt repair with no bad results. In the second place there is rarely, if ever, any need for a corneal violence that would produce traumatism.

I would like to say to Dr. Stevenson that if he will look up some of Dr. St. John Roosa's operations, he will find that he did deliver the lens in capsule with the opening downward. I saw him do one such operation. But in his cases he always lost vitreous, and usually the loss was quite extensive.

Louis Stricker, Cincinnati: I am sure this subject is full of interest to everybody. It is holding the stage all over the United States, and not only in the United States but all over the world. I had the pleasure, through the kindness of Dr. Ayres, of reading all the papers that were read in April before the International Medical Congress, which met at Naples during that month of this year. One, Dr. Valude, of Paris, condemned this operation in the most violent terms. He said he had tried it and condemned it most violently. On the next page is an article by an English surgeon, resident in Siam, who says he had done the old operation a thousand times and has done the new Smith operation 800 times; that under the old operation he had about 3 per cent loss of vitreous, and under the new he had 10½ per cent; that he had not had a single case of attachment of vitreous. These two gentlemen typically represent the opinions prevalent all over the scientific world. To see this operation the first time the mind revolts. All your study in anatomy tells you that this must be wrong. But the oftener you see it the more you are convinced it is the operation of the future, and, although older men may not be able to put their prejudices aside and accept the new operation, I am satisfied that it is only a matter of time until we will use it as the operation of election.

I have seen Dr. Greene do this operation eighteen times, and in only one case that I can remember was there any loss of vitreous. I examined some thirty-five people at the home, and the results were simply marvelous. You never get such results by the old operation, and I did not see anything in the operation that did not cause me to wonder at the results. It is a thing that is new,

and the men are very much interested in the subject, and I feel that time will prove that it is the operation of the future.

I would like to ask one question. If you make an incision below and the patient sits up even partially in bed, the whole vitreous would be likely to run out after you had finished the operation. Would it not be better to make the incision from above?

Dr. Millette (closing): I have only a remark or two to make in conclusion. That I did not dwell longer on immature cataract was due to the length of the paper. Any one of the observations I have made could easily occupy the time allowed for the paper. There is no doubt but that it is the only operation at the present time for immature cataract which has shown such good results. As I said in the paper, I think it is the operation of choice for immature cataracts, and also for mature and hypermature in most cases.

I would criticize Dr. Stevenson's suggestion in this way. It puts another instrument into the operator's hands, and the fewer instruments the better, for we are more likely to cause infection by introducing another instrument into the eye; and further, and perhaps more pertinent, there is danger of rupturing the capsule. I have seen the capsule ruptured by the mere traction of the Graefe knife-back as it crossed the pupil.

There is no doubt but that the trauma is very much greater. I have seen, among the first cases which were operated, five to eight minutes taken in delivery of the lens, and that much time spent in operating surely does look fearful and is a violation of all the teaching in regard to the epithelium of the cornea.

As to the two cases which Dr. Greene spoke of where there was lost a sufficient amount of vitreous to lose the eyes, I think his statement is too condemnatory. Those patients squeezed so hard that under any operation the same amount of vitreous probably would have been lost, and I do not believe this loss could be attributed solely to this operation.

There is no question in my mind as to visual results. If I may be permitted to use statistics, they are so strongly in favor of the Smith operation that its results can hardly be questioned. In seventy-five cases operated by the old method and seventy-five by the Smith method, by the same operator, the same class of cases, under the same conditions and as nearly the same cases as it would be possible to get seventy-five of each, the average vision of the old method was twenty-fortieths and that of the Smith twenty twenty-sevenths, including those two cases which were totally lost.

It looks to me as if it must be the operation of the future.

Dr. Greene, of Dayton (closing): In a little talk made and paper given before the Cincinnati Academy of Medicine a few weeks ago, a gentleman made the statement that I have a lot of old soldiers to deal with, and it is easy to get a certain amount of experience from them. I simply want to make a statement which I think is due the medical department of the Soldiers' Home. These old soldiers, gentlemen, are well cared for. They are under careful medical supervision in addition to the staff. The govern-

ment has its medical inspector general who goes over the Home. He has made fifteen cataract operations. He visits the Home regularly and inspects the work of the hospital. The government takes good care of these old men, and nothing is allowed to be done but what is for the very best interest of them.

Since last August I have made one hundred and fifteen cataract operations. All except four have been by the Smith method. I do it in private practice, in hospital practice, and in the Soldiers' Home. I have made no distinction in my private practice. I do this operation in all cases when no contraindication exists.

Dr. Millette referred to thirteen cases of vitreous loss. I think that is too high. But nearly every week someone comes to Dayton to see this operation, and when you are crowded you naturally take material you would not take otherwise. I think my percent of vitreous loss is higher than it should be, and higher than it will be in future when I have learned to do it better.

In regard to the use of the speculum, I never use one any more. I think one or two cases of loss of vitreous were due to its use, and I stopped using it. In Chicago just at the completion of the operation the patient squeezed and I lost vitreous, and I have never used the speculum since. My assistants use Dr. Fisher's lid retractor or the Noyes elevator, which the assistant can hold and can control the orbiculate very much better than by a speculum.

In regard to Dr. Stevenson's suggestion, I disagree with him. I do not think he could pass anything across the anterior chamber. It is easier to deliver the lens with the section downward than upward. I have found it so; but when you attempt to cross the empty chamber with any instrument, with the iris and lens pressing forward, you would be almost certain to wound the capsule. I do not think it could be done as a routine procedure.

One objection to this method, and it will always be an objection, is the broad and unsightly pupil which you are likely to get if healing is slow. Dr. Dabney's case (shown) has a pupil long on each side, broad in other words. Occasionally you will get such pupils if you are not careful in replacing your iris with and sometimes with loss of vitreous. You bandage the eye, and you do not inspect it for four days sometimes. When you open it you will see a gush of water. The chamber has opened and the iris has prolapsed. These pupils have a tendency to broaden. Usually one can tell by the position and shape of the pupil whether vitreous was lost at the time of operation.

As to the influence of the inferior rectus muscles, a very important point is right there. These patients must never look downward. You will have loss of vitreous if they do. If your patient suddenly moves the eye downward, the wound will fly open. The flap such as we make in this operation gapes easily; it flies open like a trapdoor. But after you get the lens out and the cornea back into place, there is no loss of vitreous as a rule. Everything goes along smoothly.

Going back to Major Smith's experience with vitreous loss. That has been spoken of this afternoon. He has reduced it to 8% simply by virtue of skill in the operation. What you want to do in

this operation, and what you must learn, is to do it quickly. I know where my weak point is in making the operation. I know it as well as anyone. It is hard for me to get myself up to the point of making the necessary pressure, and doing it quickly. I am improving on it all the time, but I know that is my weak point. Here is where Major Smith excels everyone else, and anyone to succeed well must imitate his technique in this respect. The method needs some study and less criticism in my judgment, since it is beyond doubt the best. I believe with Dr. Stricker that the changes in cataractous lens are chemical. I have looked into the eyes of hundreds of old men, and the choroidal theory of the causation of cataract which Dr. Risley has so ably presented, I do not believe will hold in a large percent of cases. I have found choroidal changes present quite frequently, but change in the blind vessels are more important. They are what are believed to be likened to the chemical changes in the lens itself and other changes of the fundus vessels. Where you have the lumen of the blind vessels narrowed interfering with the nutrition of the lens, you have the conditions that bring about high blood pressure and arteriosclerosis. I have also found in the examination of a large number of men, above 60 years of age, that 18 2/10% of those with cataract in some stage have a blood pressure in excess of 160 mm. Hg. These are fair, straight figures, carefully taken. They either mean something or they mean nothing. To my mind they mean a great deal. My judgment is that high blood pressure has a great deal to do with bringing about the chemical and other changes which lead to cataract, as it is the most reliable symptom of narrowing of the caliber of the blind vessels, and interference with the nutrition of the tissues of the body, we have, as is well known, its relation to arteriosclerosis, is a dual one. It may be a cause or a result.

Health Officers Met.—The annual conference of the State Board of Health and city and village boards of health was held in Columbus January 20 and 21. Among the speakers were Dr. Cressy L. Wilbur, chief of the vital statistics division of the Census Bureau; Surgeon Leslie L. Lumsden, P. H., and M. H. Service; Dr. William C. Woodward, health officer of the District of Columbia; Rufus B. Miles, of the Bureau of Municipal Research, Cincinnati, and Dr. Luther H. Gulick, New York City.

Do not be too sure that a mass in the region of the pylorus is a carcinoma. In some cases the infiltration around a chronic ulcer is very extensive and may simulate a new growth—Surgical Suggestions.

In cases of strangulated hernia a simple enterostomy after cutting the neck of the sac will often save a life where prolonged operation would result in death.—Surgical Suggestions.

SOME CLINICAL ASPECTS OF VISCERAL ARTERIOSCLEROSIS.

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[Read before the Ohio State Medical Association.]

The anatomic demonstration and clinical conception of visceral arterio-sclerosis is not new. The term is used here to refer to those conditions in which the deeper vessels are involved, and in which the disease is either localized to these vessels, or where as a part of a diffuse arterio-sclerosis there are marked symptoms on part of the visceral circulation.

The seat of the pathologic changes is in the aorta and its branches. Clinically we are most familiar with the type wherein the first divisions of the aorta are involved, perhaps with accompanying changes in the coronary vessels and the heart muscle. Any part of the aorta may be the seat of the disease. Clinicians of the French school have indeed attempted to demonstrate thoracic and abdominal aortitis, and they have found ready support, particularly insofar as their contentions regarding abdominal arterio-sclerosis are concerned. Thus Max Buch ²some five years ago published a very thorough research upon "Arterio-Sclerotic Colic" (*Arteriosclerotisches Leibweh*), contributing his own careful clinical observations, and analyzing cases reported by others. Perutz ³also made a very thorough study of abdominal arterio-sclerosis, so that the clinical picture of the condition is quite complete. Before taking up the purely clinical phases it may be of interest to refer briefly to the anatomic and physiological factors involved.

Haselbach ⁴in his anatomic statistics has shown that the splanchnic vessels may be the seat of extensive sclerotic changes, and that in such cases the abdominal aorta is also markedly diseased. The same author demonstrated that beyond microscopic changes the finer ramifications of the intestinal vessels do not become involved.

In what manner and degree the circulation in the abdominal organs is interfered with by these vascular changes depends probably upon certain conditions. Excluding the possibility of the occurrence of aneurisms of the abdominal aorta from the present discussion, there remain the possibilities that the occasional occurrence of thrombosis of the mesenteric arteries may be caused by the disease of the vessels, and that spasmodic contractions of the smaller branches of the vessels occur, that lead to a temporary rela-

tive anemia in the organs, and to an overfilling of the abdominal aorta. Therefore the abdominal aorta under such conditions appears, and in fact is, enlarged. The causes that lead to the condition are probably those that are considered to be the causes of degenerative changes in arteries in general. Lues, alcohol, nicotine, or malaria, are usually admitted in the history.

Clinically, it is possible that many of the transient digestive disturbances of advanced age may be attributed to a poor circulation in the abdominal organs.

In cases coming under observation with more specific complaints the symptoms are fairly constant. The most usual complaint is "pain in the stomach or bowel." The attacks are transient, occurring usually after long continued or heavy exertion, uninfluenced by the kind and character of food, or starvation. Occasionally the attacks occur during the digestive period only. The pain is sharp or cramp-like, and in one case I knew a patient to lose consciousness. Such attacks of pain Perutz called *angina abdominalis*. The pain radiates usually toward the back. As a rule there is also constipation; if the heart and kidneys are involved there may be concurrent attacks of true angina pectoris, and the urine may show albumin. Upon examination, if the abdominal vessels only are involved in the sclerotic process, we find tenderness upon deep pressure over the epigastrium toward the aorta. In these subjects the vessel can be felt to be rigid and distended, with clearly visible pulsation. Movements from side to side may be painful. Examination of the stomach contents reveals an inconstant picture as to acidity—from entire absence of acid to hyperacidity, and the examination with the tube does, therefore, not throw any light on the condition.

The clinical importance of the recognition of a visceral arterio-sclerosis lies in this:

1. It permits us to differentiate between this condition and other organic diseases of the abdomen. The attacks and the history may suggest cholecystitis, ulcer of the stomach, cancer of the stomach, and in two cases reported by Perutz^{3a} laparotomy was performed, from which the patients did not recover.

2. Treatment directed toward anything else than the true cause gives no relief.

3. Treatment directed to the vascular condition gives relief. The treatment consists in the administration of potassium iodide or diuretin, and strophanthus where the heart is involved.

The effects of potassium iodide are especially good where there is a history of lues.

If nitrites are used at all they must be used carefully. Anything that raises the blood pressure must be interdicted, such as heavy physical work, alcoholics, tobacco, and excess of fluids.

The following cases are fairly representative:

Case 1—A woman, age sixty-eight years, came under my observation November, 1907, complaining of severe attacks of "pain in the stomach," which have recurred irregularly but frequently during the past eight years, and she has been under treatment for "chronic gastritis" during that time without result. She has never required morphine for any painful attack. Diet does not influence pain, except when excessive in amount. She vomits occasionally during an attack. Patient complains of shortness of breath upon exertion, and the pain becomes worse. The pain does not radiate, and is not preceded by nausea.

General examination revealed a diffuse arteriosclerosis with an irregular heart. There was marked tenderness upon pressure over gall bladder region, otherwise the examination of the abdomen was negative. The history as well as the examination at first suggested gall bladder disease, but there were certain elements that caused me to doubt the existence of this disease, especially in view of certain cases cited by Neusser, where angina pectoris had simulated cholecystitis.

The patient was put upon a course of nitroglycerin. The pains ceased rapidly, and so far as I know they have not recurred.

Case 2—Mr. C., aged 35, of Springfield, Ohio, came under observation December 1, 1907, complaining of "acute pain in his stomach," which has troubled him two years. The pain comes on during the day, and is not influenced by diet. Cannot undergo any exertion without becoming short of breath. Patient points out as the tender area the gall bladder region, the liver is not enlarged, but very tender to pressure. The heart is markedly enlarged; there is systolic diastolic murmur over the aortic area, and also a mitral murmur. Because of this condition of the heart I suspected that the pain was really of cardiac origin and not due to cholecystitis. The patient was admitted to the hospital, where with three weeks' rest, strophanthus and nitroglycerin all pains subsided, the patient's heart condition improved greatly. Living carefully, he remained free from pain for six months, and then died suddenly.

Case 3—The patient, a man aged 38 years, came under observation November 1908. His occupation compels him to be on his feet constantly. The evening before he was suddenly taken with violent cramps in the abdomen, "as though the

bowels were held in a vice," and he became unconscious. He states that he has had occasionally such attacks of pain during the past year, but not so severe. At the time of examination there was extreme tenderness over the epigastric region extending below the umbilicus. To turn in bed produces pain—"a pulling pain"—in the abdomen. The patient has no fever. Knee jerks present. The abdominal aorta can be seen to pulsate, it can be felt as a rigid and apparently enlarged vessel, very tender to pressure. Examination of the heart reveals a slight systolic murmur in the aortic region, but there are no symptoms on part of the heart. The second aortic sound is accentuated. A diagnosis of abdominal arterio-sclerosis was made, the patient was given a course of potassium iodide. The abdominal symptoms gradually subsided, and he has had no attack since.

Case 4—The patient, a man, age forty-eight, seen January 28, 1909; chief complaint, cramp-like pains in the abdomen and occasional diarrhoea. The condition has lasted about one year. He states that about six years ago he was suffering from temporary paralysis of the external rectus muscle of one eye, for which he was treated and he recovered. Knee jerks present. The abdomen is somewhat distended and sensitive to deep pressure in the epigastrium in the median line. The aorta cannot be palpated, and cannot be seen to pulsate. Liver normal size. The heart is normal, but the aortic second sound is accentuated and ringing. The peripheral vessels are not sclerotic. I nevertheless believed that in view of the history and the findings as stated the patient had probably sclerotic abdominal vessels. A course of potassium iodide and mercury brought prompt relief, both of pain and diarrhoea.

Case V. The patient, a man of forty-five years, came under observation June, 1908, complaining of "pain in his stomach" which comes on daily, and has for months prevented him from doing his work. He has been under treatment in hospitals and elsewhere during the past year for the condition. the pain is independent of the kind and character of food.

Upon examination there was found a tumor the size of half an egg seated superficially in the epigastric region. This tumor is tender to the touch and the patient refers all his complaints of pain to the region occupied by the tumor. The heart was found to be slightly enlarged, and a systolic diastolic murmur could be heard over the aortic area. The patient further states that he has occasional attacks of shortness of breath after exertion. The abdomen is distended, tender in the epigastric region to deep pressure. He states

that the bowels are constipated. A diagnosis of arteriosclerosis of the aorta, disease involving the abdominal vessels, was made, the patient was given strophanthus and nitro-glycerine and on the fifth day he had returned to work, free from all pain. After some months he developed more symptoms of abdominal pain with cardiac insufficiency. He would not tolerate potassium iodide, and diuretin was substituted with good results. For further rest the patient went to a hospital, and I do not know his present condition.

LITERATURE.

1. Cited by Bach, *Archiv. für Verdauungs-krankheiten*, 1904.
2. Bush, loc. cit.
3. Perutz, *Muench. M. Woch.*, LIV, 1907.
4. Buch, (cit.) loc. cit.

DISCUSSION.

Henry Wald Bettman, Cincinnati: I have listened to this paper with a great deal of interest, and at the same time with a great deal of caution. I think the chief lesson to be learned from it is that arterio-sclerosis may be accompanied by, or may produce symptoms which are pre-eminently abdominal in their nature. I could not quite follow the essayist to his conclusion that arterio-sclerosis limited to the abdominal vessels was a disease sui generis. I accept such a conclusion with a great deal of reserve, for the reason that it lacks an extensive anatomical or pathological basis; and even the clinical basis which underlay the report showed us that the patients whom the author treated were all subject to general arterio-sclerosis as proved by the physical signs; so that the only thing I can accept as definitely proved is that arterio-sclerosis has symptoms which may simulate abdominal disease. The abdominal symptoms may be so prominent that they may entirely cover up or disguise the thoracic origin of the symptoms.

It was only a few years ago that a case was operated on in Cincinnati for supposed abdominal disease, but the patient died some weeks later of a thoracic aneurism. It is very hard for us to separate clinically the cases of so-called angina abdominalis from cases of true angina. In one case the true angina symptoms are chiefly in the thorax, in the case of angina abdominalis the symptoms happen to be chiefly below the diaphragm. It is probable that there is no distinct anatomical difference between the cases in which the symptoms occur in the thorax and those in which they occur in the abdominal region. Where we have extensive disease of the kidneys I have been impressed over and over again with the enormous changes that take place in the abdominal aorta. Very often the whole intima is calcareous and we can strip off plaques over an area of many inches. Many of these patients had no local symptoms of abdominal arterio-sclerosis. I hesitate to accept as a definite entity a condition such as visceral arterio-sclerosis which localizes the arterial changes and is supposed to produce abdominal changes independent of the general disease. My skepticism is a little more increased on account of the very favorable results of the

therapy. It is reported that relief was had from a brief treatment by strophanthus and nitroglycerine. That the symptoms of advanced arterial changes can be made to disappear permanently by a few days' administration of drugs is to me clinically inconsistent. Therefore I think I would enter upon this study with interest but conservatively. Possibly we are dealing with a distinct pathological and clinical disease; quite possibly we are dealing with a local manifestation of a long since generally recognized arteriosclerosis.

J. H. Schroeder, Cincinnati: Mr. Chairman, I have very little to add to what I have said. I would like to reply to the point raised by Dr. Bettman. In the first place the conception of visceral arterio-sclerosis is by no means new with me. I merely collected these cases because they all tend to bear out statements in clinical reports made by men whom I consider to be very competent observers. As I pointed out very clearly in the paper, and also in the report of the cases, most of these cases are associated with general arterio-sclerosis, and many with myocardial disease. It is very rare, indeed, that we find only abdominal manifestations, either anatomical or otherwise, of arterio-sclerotic conditions. At the same time there are cases that show absolutely no signs or symptoms on the part of the heart, with the exception of the accentuated second sound, and in which there is no gross peripheral involvement of the blood vessels. In one case that I have reported the abdominal aorta was accessible to palpation, and there was to my mind no other diagnosis possible than that of abdominal aortitis.

As to the speedy relief from symptoms with proper treatment, the symptoms are those of a true angina pectoris, of an angina abdominalis due to a transient spasmodic contraction of the blood vessels, and the pain in the latter form of the disease can be relieved as readily as the pain of a true angina pectoris.

Local anæsthetics can not be injected painlessly into tense, inflamed areas unless the injection is begun at a point in the skin well beyond the seat of inflammation.—Surgical Suggestions.

Always examine a child suffering from chorea for the presence of adenoids. The removal of the growths in the pharynx may cure a mild case.—Surgical Suggestions.

Have the tracheotomy instrument handy before operating upon a case of angina Ludovici.—Surgical Suggestions.

In determining the cause of post-operative fever never fail to examine the throat.—Surgical Suggestions.

Olive oil in two dram doses is recommended for post-operative (ether) nausea.

THE TREATMENT OF CLUBFOOT IN INFANCY.

ALBERT H. FREIBERG, M. D.
Cincinnati.

[Read before the Ohio State Medical Association.]

It is an interesting fact that one finds practically no discussion of the treatment of congenital clubfoot in medical literature of the day. This is particularly remarkable in view of the fact that orthopedic literature is more abundant now than ever before, and, on the other hand, that only a few years ago this subject was under continual discussion. To an orthopedic surgeon the reason for this change is not far to seek; to the orthopedic surgeon of modern training this has become practically a closed chapter. This is due largely to the development of the methods of forcible redressive manipulation which we owe to the influence of Lorenz and Julius Wolff. It is now almost universally recognized that there is practically no limit to the possibilities of such corrective manipulations except the patience and skill of the operator and the resources at his command for employing greater degrees of force than can be put forth by the unaided hand. For this purpose a large number of mechanical contrivances have been devised which are all useful and efficient in degrees varying largely with the personal element in those who use them. It has been thus recognized that the crux of the problem lies in securing a satisfactory overcorrection of the deformity by overcoming the resistance of the soft parts which hold the bones in their abnormal relationship to one another. The technic of retention in this overcorrected position by means of plaster of paris has been perfected to such an extent that this is no longer a moot point if only the before-mentioned first requisite be attained. I find, however, that there is very frequent failure to realize the importance of the third requisite for accomplishing real and therefore permanent cure—namely, that having overcorrected the deformity, mere retention in the overcorrected position will not bring about a cure be it ever so long maintained. There must be added to such retention in the overcorrected position the influence of function, of weight bearing; the patient must walk upon his foot, which is held in the overcorrected position until, as the result of this function, the bones have responded by a change of their structure. Only thus can we perpetuate the correction which we have made and not by mere retention, however prolonged

this may be. These sentences are meant to embody only the principles upon which the treatment of clubfoot should rest. They are not represented as a discussion of the details of such treatment. Overcorrection of the deformity is to be considered the prime requisite; it is not essential that this be achieved entirely by bloodless manipulation, however. Thus the element of equinus in the deformity is almost universally overcome by tenotomy of the tendo achillis.

In the present discussion it is proposed, however, to deal solely with the infantile clubfoot;

tention in the overcorrected position, is easy or difficult in the infant according to circumstances varying both in the patient and the physician. The means of retention which are almost universally chosen for this purpose at the present time are plaster of paris dressings. The application of this dressing to the foot is admittedly a difficult task. Indeed, in my opinion, it is the supreme test of plaster technic. Granted, however, that the plaster technic has been mastered, the conditions in the infantile clubfoot are still subject to so great variation as to make the ap-



ILLUSTRATIVE CASE I.

Child four months of age brought to me in March. No previous treatment whatever. Photograph made before the treatment was begun. Case of average severity.

therefore as it requires to be considered within the first year of life. While the above-mentioned principles of treatment may be considered to hold good for individuals of any age under forty-five, the details of treatment vary greatly in agreement with the changes in the strength and resistance of the tissues as life advances. We find accordingly that overcorrection can be most easily accomplished in the newly born, that at six or eight months it is not difficult to overcorrect even severe deformity with the little patient anaesthetized. The second requisite, that of re-

plication of the plaster dressing, comparatively simple in some cases, in others so difficult as to justify us in considering it altogether impracticable. These cases are the ones in which the foot is short and very fat; in which the posterior process of the os calcis is so badly developed as to deprive us of our only means of holding the heel twisted slightly outwards, and this is a sine qua non of satisfactory retention. Added to this is the necessity for carefully avoiding pressure sores under the plaster by

means of cotton padding and the application of the bandage without unnecessary tension.

Assuming again, for the sake of argument, that satisfactory retention by plaster is feasible, we are now confronted with another important consideration in the infantile case. In accordance with our original declaration of principles, the retention once accomplished must be maintained until by means of function the transformations in the bones of the foot have been consummated. This implies wearing the plaster dressing until the child has completed its

go through a period of from sixteen to eighteen months replete with tedious reapplications of plaster dressing during which the opportunities for bathing and rubbing the feet are to be denied the little patient. When we consider, however, that during the first eight to twelve months of this disagreeable treatment we are not even progressing rapidly towards a cure, but are merely maintaining a corrected position against the arrival of the time when the truly curative forces come into play by means of standing and walking, the question forces itself upon us



ILLUSTRATIVE CASE I.

Photograph of the same case immediately after the first application of the splints. The great toe has been brought into line with the leg. The child is not suffering. This first application in a child of this age is often more difficult.

eighteenth month, provided that it begins to walk in the thirteenth or fourteenth. To neglect this precaution means that we shall have many imperfect results, many cases of so-called relapsed clubfoot. This term is really a misnomer, since it involves a contradiction in terms. A cured clubfoot can no more relapse than can a normal foot. Relapse means that the cure has been only apparent, that the bones had not yet been transformed by function in a normal position. The method of treatment outlined above means therefore that the child, parent and surgeon have to

whether it were not better to defer the time of complete overcorrection until the near approach of the time for walking, thus greatly shortening the period during which the little feet need be imprisoned in the plaster casing. It is fair to say that it has been the occasional experience of every man who has had much of this work to do, that having made the complete overcorrection in the third or fourth month of the child's life, and having encountered the difficulties above adverted to, he has found himself in the disagreeable position of having to make another

corrective manipulation under anaesthesia in the twelfth or thirteenth month because of the unsatisfactory position of the foot. Thus all of the work and care of the previous eight or ten months seems to have gone for naught. Only too often must it be considered fortunate if the parents have not by this time become utterly discouraged and dissatisfied.

With no class of cases coming under my care as an orthopedic surgeon have I had greater satisfaction in the ultimate results than with

quired to achieve this result, since much of it seems now to have been unnecessary.

I have endeavored to show by what process of reasoning and in consequence of what manner of experience I have come to the point of changing the plan of treatment of all cases of congenital clubfoot coming into my hands before the completion of the eighth month. This has meant, for me, a departure from a plan of treatment consistently adhered to since 1892, at which time I published my experience with the



ILLUSTRATIVE CASE II.

This child was not brought for treatment until he had become 18 months old. The correction was more difficult than it should have been under the treatment proposed, but the final result is perfect. This kind of experience shows that we need lose nothing in the result by waiting with the over correction. The deformity was more severe than in Case I.

those clubfeet which I have been enabled to treat from early infancy. In spite of this fact, I have come to realize, however, that these results were attained at the expense of many unnecessary trials and much superfluous labor both on my part and that of the mother. I was much pleased, a few days ago, to encounter such a patient of mine, now just approaching womanhood; it was a source of pride to me that her feet and gait were beyond criticism, but I sighed at the thought of the labor and care which were re-

quired to achieve this result, since much of it seems now to have been unnecessary. I feel that in the two years which have elapsed since adopting the present plan of treatment, the results have abundantly justified the change.

While the main element of change in the present plan of treatment is to delay the performance of forcible correction and the plaster of paris dressing until shortly before the child begins to walk, no greater error could be made than by assuming that all treatment is thus deferred; on the contrary, the treatment is to be active and

aggressive from the earliest possible moment. Before entering into the details of the method, I beg to offer certain preliminary considerations which may be looked upon as almost axiomatic and therefore of great importance in the present connection:

1. The deformity of equino-varus consists of two distinct elements—the equinus, which is dependent upon the shortened tendo achillis, and the varus, which is dependent upon the abnormal relations and conformations of the tarsal bones.

2. The element of equinus can be easily corrected at any time by tenotomy and proper after-treatment. It is the easiest part of the deformity to dispose of.

3. The constant pull of the tendo achillis upon the heel favors the development of the posterior process of the os calcis; early tenotomy does the reverse. The pull of the tendo achillis upon the heel, moreover, constitutes a counter pull which is of the greatest advantage in making the overcorrection of the varus deformity.

4. For these reasons tenotomy of the tendo achillis should be deferred as the very last step in the overcorrection. The equinus element may therefore be ignored in the infantile clubfoot until the time for the final correction under anesthesia.

If now, in accordance with what has just been said, we ignore the position of the heel—that is, the element of equinus—in the untreated infantile clubfoot, it will be found possible, by gentle and painless manipulation, to bring the forefoot into the axis of the leg, thus overcoming the abducted position of the forefoot. The forefoot and leg are now in a straight line and can be easily held in this position by means of a simple splint and a roller bandage. I usually cut the splints myself, using sheet zinc for the purpose; the splint should be concave from side to side to contain the leg from just below the knee and should extend one-quarter inch below the great toe. The edges should be well protected and it should be lined with thick felt so as to avoid pressure sores. The splint is applied to the internal aspect of leg and foot and firmly bandaged in place by means of a muslin bandage. It is intended that the splint shall be removed by the mother morning and evening for the purpose of rubbing and bathing and particularly for manipulation of the foot in the manner of overcorrection, this having been carefully demonstrated by the physician. I have had no difficulty whatever in teaching mothers to carry out these manipulations and to apply the splint properly. The effect of the daily manipulation and constant

wearing of the splint is a constantly increasing degree of flexibility in the foot. We have thus described what is to constitute the entire treatment until the time of complete correction under anesthesia.

The best time to undertake the complete correction should be as close as possible to the beginning of walking. We may, therefore, very well defer it until the child makes evident attempts to stand. This will usually be in the eleventh or twelfth month. I have occasionally found it difficult to withstand the entreaties of a mother and have made the overcorrection in the eighth or ninth month. The objection to this is the longer period of plaster fixation, and there is no particular advantage to be gained, in my judgment. Once the time for the forcible correction has arrived, the case passes from under the rubric of my paper. It is now no longer an infantile clubfoot, but is to be managed precisely like the clubfoot of an older child. I shall not enter into the details of this part of the treatment, nor the after-treatment. This would carry me too far and involve a different discussion altogether.

I had set for my task, to define for the family physician, as well as the surgeon, what attitude to present towards the congenital clubfoot which he sees at birth or at any subsequent time before the function of walking has been established. I feel justified in submitting the following conclusions:

1. The most potent factor at our command for the cure of clubfoot is the influence of weight-bearing upon the foot held in an overcorrected position.

2. Since this factor is not available until the tenth to the twelfth month, it is unnecessary to maintain overcorrection by means of plaster of paris until a period shortly before this.

3. Tenotomy for the correction of equinus should on no account be made until the other elements of the deformity have been disposed of.

4. On account of the greater size of the foot, both the overcorrection and the retention dressing are more satisfactorily made between the tenth and thirteenth month than is the case within the first few months of life.

5. The period elapsing until the time for forcible correction has arrived is not to be spent inactively, but is to be utilized for increasing the flexibility of the foot by manipulations, accomplishing a partial correction of the varus by means of a splint.

6. The daily removal of the splint gives opportunity both for massage of the limb and

active muscular effort on the part of the child. It is believed that by this means the residual atrophy of the leg muscles is held to a minimum.

7. It is believed that the whole period of treatment under this plan is not longer than under the other plan; that one anesthesia will as a rule suffice, whereas under the older plan several such administrations were usually required.

8. Because of the greater age of the child the correction as above suggested is much less objectionable to the parents and the plan of treatment usually commends itself to them, as it has to me, as being thoroughly rational.

In all of the foregoing it has been assumed to be the position of the modern orthopedic surgeon that bloody operations other than tenotomies have no place in the treatment of clubfoot at this age, and likewise that the more complicated forms of orthopedic apparatus formerly largely employed as a means of final correction are to be replaced with advantage by forcible redressive manipulation. It has not been considered advisable to discuss these aspects of the question at this time.

DISCUSSION.

Dr. Hundley: I probably have the honor of being the oldest clubfoot man that was ever operated on in this part of the country, having been a case of double talipes, at the age of forty. The paper was an elegant paper, the principles were mechanical, the principles were right, and yet conceding that the principles are right, men who work at this business will have ways and means of their own, and I don't feel that I can concur with all the principles that the essayist advocated. The fact of the one or two sole things that he made mention of are correct in their way, that is, over-correction and then mechanical means of retention. I don't feel as though I want to coincide with his views concerning the manner in which he treats his children until they come to the walking age. It was once thought, a few years ago, that the right time to cure talipes-equino-varus was to begin just as soon as you had delivered the after-birth. In manipulation that is true, and if I can get a child at the age of ten, eleven or twelve months, with an exaggerated or a mild case of clubfoot, I can shorten my treatment, I am sure, to begin at that age, however, I like to begin earlier. My retention in the early stages is a little different from this gentleman's. In the first place, I manipulate under anesthetic, and I correct the condition, if possible. In this correction, or maintenance of a partial correction, there is a shortening of all the plantar fascia that

you don't overcome. You overcome the shortened tibial muscles, it is true, and you encourage the contraction of the peronei muscles, and that is one thing we have to do; but there are other things. There is a contraction in the plantar part of the foot going on all the time, and the bones, so far as flexion and extension are concerned, are forming new facets that will have to be overcome later and will be painful. So I make this point. I correct my child's foot under an anesthetic, if necessary, and I over-correct. I do it without the knife, if I can; if not, I use the knife, but when you commence in time you can do it without the knife. Then I put on a small shoe with a zinc sole in the bottom of the shoe, then plaster of paris over that. The argument he would have for not putting on plaster of paris is the development of the foot. After the child has arrived at the walking age those muscles will develop anyhow. So that I believe it is proper to make the partial correction that he makes, but to make the full correction, and then to tax your ingenuity to hold it there in retention. If I see a case that has come to ten, eleven or twelve months, I over-correct fully, and then I put on my plaster dressing, and in those cases I generally have to use the knife, cut everything I think which would be short, I don't care how deep you go into the plantar surface, and also cut the tendo achillis and over-correct thoroughly and put on plaster of paris. But I believe in putting plaster of paris dressings on infants, and from an experience of 200 cases I am now thoroughly satisfied with the work I have done, but I did believe seven or eight years ago that we should commence immediately, whereas I now believe that you shorten your work if you don't see your case until it is ten months old. When I see a case early, I put on a little shoe and plaster, and overcome the entire deformity.

Dr. Caldwell: I have listened to Dr. Freiberg's paper with a great deal of interest, and being somewhat interested in this work, feel that I can endorse a great deal of what he has said with regard to the early treatment of congenital clubfoot, but as Dr. Hundley has said, I think we must take some of this with a degree of reservation. There are all degrees of clubfoot, and the rule Dr. Freiberg has laid down for the early treatment of clubfoot pertains, I think to the slight or moderately developed types of the disease. There are cases where we see not only the one but the other clubfoot so deformed that we have a contraction of the long diameter of the foot; the foot is flexed upon itself, the plantar fascia is contracted, the talipes-equinus is marked, there is a deep wrinkling of all the soft tissues of the plantar inner surface of the foot, and we have with this at times something to which attention

has not been sufficiently called, and that is, contraction of the tibialis posticus. Now, Dr. Freiberg has said—and I think it would do in the moderate cases—to let the tendo achillis alone until late in the case, but there are certain cases where if we pursue this plan, the tibialis posticus will be contracted by reason of extreme elevation of the heel and flexion of the foot, so that in a number of cases it has been my plan to divide the tendo achilles, and also to make a plantar fasciotomy—it can be done under local anesthesia—cutting the plantar fascia, straightening out the foot, enabling one afterwards to get that tension upon the tibialis posticus. The foot is put up temporarily in a posterior splint, or plaster, or even a starch splint, and subsequently the corrective measures are undertaken for more severe grades. But I think it is of primary importance that we put the foot in such position that the tibialis posticus will not become unduly contracted, and in that way we will obviate a great deal of difficulty. The deformity of the bones occurs only after the child begins to walk, and forms the facets spoken of by Dr. Hundley. So that I would endorse thoroughly what Dr. Freiberg has said, in fact have advocated the manipulative treatment for the last fifteen years, not operating except to perform plantar fasciotomy and tenotomy of the tendo achillis.

Dr. Freiberg: In the first place, as regards the statement of Dr. Hundley, I have this to say, that Dr. Hundley has evidently overlooked the fact that he finds himself in perfect accord with what I have said rather than the reverse, because he says he likes to make the over-correction at the tenth month. If it is not made before the tenth month, I have very little objection to it, because this is the time I like to make the over-correction. The point is, it should be made when the child is beginning to bear its weight upon the foot.

As to the severity of the deformity, I believe I get to see all grades of clubfoot. I have yet to see a clubfoot of whatever degree, even when the foot is in contact with the inner side of the leg, within the first eight months of life, that I cannot within a few sittings—three or four days—manipulate sufficiently to enable the child to be treated with this straight splint, and I also make the statement unequivocally that if the splint is applied, only being removed by the mother for manipulation and bathing, that it will be unnecessary to make any tenotomy of the tibialis posticus. It is impossible for the plantar fascia to continue to contract. Indeed, I don't think the plantar fascia does continue to contract until the individual arrives at the walking period. It is contracted when the child is brought into the world. There is no reason why it should contract if the foot is held in this straight position. If the gentleman had noticed the position of the splint on this foot, he would have seen that it is impossible. The only element of deformity that requires consideration which is not influenced by retention by this simple splint, is the element of equinus, being completely and easily disposed of by means of a tenotomy, after which the foot is encased in plaster of paris.

There is no reason why every congenital clubfoot should not be made into a foot practically perfect, if treated by this method.

FISTULA-IN-ANO WITH SPECIAL REFERENCE TO TUBERCULOSIS.

GEORGE B. EVANS, A. M., M. D.

Dayton.

[Read before the Ohio State Medical Association.]

While the professional mind has been so occupied with major operations upon the rectum, one scarcely dares to appear before the public in a paper upon apparently so trivial a subject, but those of us who have done much rectal work are well aware how often our skill and patience, as well as the patience of clients, have been taxed to the utmost. Knowledge of or the time and patience necessary for the local and proper treatment of these cases has been so wanting with the general profession, that persons suffering from the minor ailments have been in self-defense driven to advertising specialists for assistance. On no other subject, perhaps, has the public been so deceived as on that of fistula. Incontinence, stricture, hemorrhage, shock and blood poison, as resulting from operations for fistula, have been so paraded by irregular practitioners that many believe them to be the rule rather than the exception. I speak advisedly, knowing from experience what I had to contend with in the last fifteen years. In order to understand the true principles of treatment, which have been finally established, we must consider the origin of fistula, the causes that give rise to it, the symptoms attending it, and the treatment. In this paper I will not refer to the different varieties of fistula, as a better understanding of the same can be obtained from the text-book, and time will not permit, if I so desired. A rectal fistula is the result of an abscess, hence preventive treatment, or the early treatment of the abscess, is very important. It is the too-common observation of those who do much rectal work that abscesses around the rectum are treated by the physician in a very unsurgical manner. Instead of opening the abscess freely and giving free exit to the pus or relieving the inflammatory tension, it is usually poulticed until it bursts, or a very slight incision made. The cause of these abscesses or fistula is either trauma or indirect infection. Trauma due to a fall or

blow upon the buttocks, or the abscess or fistula may be due to an internal ulceration previously neglected. Punctural wounds, and injuries from sharp bodies within or outside of the rectum, may carry septic germs directly into the cellular tissue and thus produce abscesses. Ulceration of the crypts of Margagni, or the rectum proper, may result in abscess through direct extension of the ulcerative process or by infection through the lymphatics. The frequent cause, however, of abscess is infection through some lesion of the anal canal. Small fissures or wounds in this region are very liable to become infected, and as the infection is likely to affect the middle lymphatics, these will involve the ischio-rectal fossae. In the first place, a collection of pus is formed under the integuments of the hip near the anus and usually to one side. This deposition or infection sometimes occurs quickly, with heat, redness and pain of the part; at other times, slowly and insidiously, without any sign of inflammatory action, so that the first circumstance that attracts our attention is a flat and ill-defined swelling that results from the pressure of fluid, together with thickening of the adjacent tissues.

Generally, one will be able to make out in such cases a distinct circumscribed mass, globular and more or less fluctuating. The patient suffers from a distinct rigor or chilliness creeping up and down the back, followed by fever, accelerated pulse rate, headache; this is followed by a dull aching and finally throbbing pain. In very deep cases, in order to feel the induration, it will be necessary to introduce the finger well into the rectum and press downward and outward while palpation is made with the other hand upon the external surface. In whichever of these ways the abscess is formed, and every variety is met with, from that of a few hours to the slowness of many days, the pus, if left to itself, sooner or later, by inducing absorption of the neighboring tissues, makes a way for itself to the surface; but as it is situated between the skin and the mucosa of the rectum, it may affect evacuation through either the one or the other of these coverings, and it is generally through the skin first. This opening is usually small, often hardly perceptible, and if the sinus be examined after its contents have been discharged, we will be amazed to find how closely the pus has traveled to the mucosa of the bowel and not penetrated it, but on the other hand has pursued its way through the cellular tissue and through the skin. If he has been in severe pain, now he feels comparatively well after the pus is evacuated, and may suppose that he is to recover without any further trouble; but the cavity of the abscess,

though it contracts, does not become obliterated; the discharge continues of a thin and milky consistence, and the orifice acquires a still greater degree of straightness, at the same time generally projecting from the surface of the skin in the form of a small, pimple-like protuberance, at the summit of which it is situated. This appearance is owing to an effusion of organizable matter around the opening, in consequence of the continual irritation which is caused by the discharge passing through. From the same cause the sides of the sinus acquire an increase of thickness and density so as to assume the condition which in surgical language is designated fistulous. If the disease is still permitted to pursue its course unchecked, a small opening is sooner or later formed, also through the thin, denuded part of the mucous membrane of the rectum, thus forming a complete fistula. In those cases when the abscess is the result of previous ulceration due to trauma of the mucosa the internal opening will first make its appearance known by pain on defecation and moisture around the anus. To say the least, every rectal abscess, whether it be well developed or not, should be freely opened as soon as there is the slightest suspicion. It certainly does not redound to the physician's credit to allow pus to burrow for days, as is often the case, around and through the tissues adjacent to the rectum. Open up the inflammatory induration deep and wide, whether you have positive evidence of pus or not, and the chances are you will save your patient a fistula. A fistula which is not due to ulceration and perforation of the rectal wall from within is the result of a previous abscess, due to an inflammation, and that the result of a traumatism, and that traumatism may be inflicted by a fish bone, or nut shells, or it may be due to a fall and striking upon the buttock. Or, again, as I have seen in a number of cases, due to the treatment by injection of carbolic acid of internal hemorrhoids. In two cases I found it due to caries of the lower portion of the sacrum and coccyx. A fistula may heal spontaneously or after a very slight excitement to reparative action, such as the mere passage of a probe in making an examination.

Kelsey reports one case where the fistula closed without even the passage of a probe. Allingham refers to no less than fourteen cases in which the disease got well after his examination without treatment, or by the use of very simple palliatives. This naturally leads us to consider the prognosis of anal fistula, and to ask ourselves what other results are to be expected besides the rather remote chance of spontaneous

cure in case no treatment whatever is undertaken for the cure of the disease. It may be answered with confidence that in the great majority of cases fistula not only persists indefinitely, but that, as a rule, it tends to grow worse by burrowing, and by the formation of secondary abscesses, new tracts and new orifices. Moreover, there is a possibility that it may increase in extent to such a degree as to render an operation for its cure so serious, from the number of incisions required, as to impair the retentive power of the sphincters, or by the excessive drain upon the system endanger life. Setting aside this class of cases, we are at once brought to the question which will often be asked by the patient, and which the surgeon may not always be able to answer to his own satisfaction, whether it is always best or even safe to try and cure a fistula.

In my practice today, where the patient presents himself with an acute inflammatory swelling indicative of abscess, I always make a free incision into the part, and then another incision at right angles to the first one, whether I find fluctuation or not, and then apply gauze wrung out of hot 1-3000 bichloride, first packing the wound with iodoform oil gauze, to be left there 48 to 72 hours. This packing to be renewed loosely every day, previously cleansing the cavity with lysol solution. If there is suppuration, empty the abscess as above stated, use your curett thoroughly and efficiently, and then better use the thermo cautery to insure the destruction of all infectious material that may be overlooked. If the patient presents himself with a well-established fistula, the tract is dissected up with a probe pointed grooved director as a guide, looking carefully for a branch or branches, and if any are found, to be treated likewise to their source. If the director fails, and this is very rare, to enter the rectum proper after the most diligent search, to push it through, and then make another if possible more diligent search for the internal opening. The tract is then thoroughly cleaned out with a curett and snugly packed with gauze, to be removed every day if necessary until the wound is healed. I am aware that some surgeons advise the closing of the wound with deep and superficial sutures. I have tried this plan, using the greatest of care, not only in the work done, but in the selection of the material used, and have failed in every instance. Always make your incision at right angles to the gut, if the case is one where we have a complete fistula on both sides of the buttock. I am careful to cut the sphincters but once, if possible, and then make the tract on the opposite side quite large,

so that I may be able to pack the opposite side with ease and heal the wound from the bottom. If the second or opposite opening into the gut has not closed, the sphincter, as a rule has not lost its tonicity, and I can incise it with less risk than if I had done both sides at the first seance. In the superficial fistula I follow the plan as advised by Kelsey, viz., discard all dressings after the third day and simply keep the parts clean and insert my finger each day; thereby you are not so likely to disturb healthy granulations, and thus retard the recovery of your patient.

To me the most important thought connected with this paper is, what relation does fistula-in-ano bear to phthisis pulmonalis, and what course it has to pursue. Both the physician and the surgeon should have a practical interest in this subject, for the patient usually comes under the observation of the physician first and then is referred to the surgeon for operation.

There has been much discussion among the profession as to the frequency of fistula as a complication of phthisis, about six per cent. of the people who have phthisis have fistula, while on the other hand a larger per cent. of the people who suffer from fistula have lung trouble. As I take it, there are two varieties of tubercular fistula; one is where we have a local deposit of the tubercle bacilli of the rectum, which breaks down and ulcerates and finally terminates in an abscess and fistula. The other variety consists of a simple fistula in a very much run-down person as the result of long-standing lung trouble. In the latter we find no bacilli in the scrapings. The difference between a person suffering from a simple fistula and lung trouble and the one having a simple fistula is that the former is very much emaciated, and whose resistive power is about exhausted, so that there is delayed healing after the fistula has been cut. When a patient is suffering from a fistula the result of a local deposit of the tubercle bacilli, we will find a marked difference from the one having a simple fistula. These patients are of marked low vitality, pale with the hectic flush, evening temperature, and generally with an annoying cough. We will find an abundance of long, silky hairs around the anus, and the sphincters patulous and easily passed by the finger. Owing to the loss of fat, the ischio rectal fossae are more or less hollowed out. The external opening is large, and a probe or finger may be passed within and swept around in every direction under the skin to a greater or less extent. Again, it will be found that the internal opening is also large and generally found within

the first two inches of the rectum, generally between the two sphincters, and attended with little or no pain. Now, what a contrast. In the robust patient with the ordinary fistula we have a small opening, tight sphincter, round buttocks, and increasing pain, often very severe. Now, what shall we do with this class of unfortunate patients? Shall we operate on these fistulae with lung trouble? Do we accomplish anything if we do operate? There is a class of tuberculous abscesses in the peri-rectal tissues, which are of a strumous origin, and independent of an mechanical injury, that are accompanied by fistula of the most aggravated type. This form calls for constitutional as well as local treatment. I do not believe that the drain of a fistula upon the adjacent rectal tissues has a salutary influence upon tubercular diseases of the lungs, but I do believe that the general debility and constitutional irritability, resulting from the constant wear and tear of fistulae involving the tissues around the anus are a menace and in most cases aggravating circumstances in the progress of other diseases, and the more effectually they can be cured the better. There was a period when distinguished members of the profession were arrayed against operating for fistula-in-ano when it occurred in a tubercular patient; but that day is past, and now the weight of authority is favorable to operative interference for eliminating the local trouble and arresting the drain upon the system.

I believe—I know—that I have cured many patients of fistula who had lung trouble in a marked degree. I believe that I have cured others where the fistula was unquestionably due to the local deposit of the bacilli, and in many of these cases I believe the operation resulted not only in the cure of the fistula, but a great improvement in the lung trouble, due, I believe, to the fact that since we have arrested one destructive process nature is more capable of arresting the other. I believe that to operate upon a patient with acute lung disease, one greatly emaciated, who has constant cough, night sweats, hemorrhages, etc., and I am convinced that the lung trouble alone will kill him in a few weeks, would be not only cruel, but bad surgery; but there are some cases of tuberculosis that are not so destructive as others, and we know that there are cases which at one time exhibited evidences of the breaking down of pulmonary tissue, the formation of cavities, etc., ultimately recover and attain a fair old age. I believe, yes, am quite certain, that there are many persons who have phthisis complicated with fistula, who, because they have phthisis, have nothing done

with their fistula and who, in consequence, are wretched, when they might be rendered more comfortable by an operation by a skilled surgeon. I believe that there are advanced cases that we can do much to make them comfortable by dilating the external opening and thereby secure drainage. I believe that we should not subject this class of cures to the danger of general anesthesia. I believe that chloroform should be the anesthetic used, as ether irritates the air passages. Whenever possible I believe local anesthesia is the ideal anesthetic. I believe that the greatest care should be exercised in losing as little blood as possible. I believe that we should do it quickly. I believe the sphincter should be cut but once and that at right angles, for inconvenience is likely to follow, owing to delayed healing and low vitality. I believe that after the sinus has been opened in the ordinary way, it should be curetted and all overlapping edges trimmed off, wound packed snugly with iodoform gauze, to remain three or four days, unless occasion necessitates its removal. I believe the wound should be thoroughly cleansed every day after the granulations have appeared, but do not pack the tract, as it delays healing. I believe that in these tuberculous cases it would be well to open these sinuses with a cautery knife and cauterize all the pockets thoroughly. I believe these patients should not stay in bed or house a day longer than absolutely necessary. I believe they should have the best of food and plenty of it. No cod liver oil or creosote.

Having accepted a case, however, uninteresting, I believe it is our duty to give them our very best skill and our daily attention.

The acute infective forms of submaxillary cellulitis are occasionally diagnosed Ludwig's angina. In the simple infections the floor of the mouth is not infiltrated. The important differential symptom is that, in an ordinary submaxillary infection there is an early edema (swelling) of the mucous membrane between the cheek and lower alveolar arch. This part of the mouth is not involved in the true form of Ludwig's angina.—Fletcher.

One death from urethral sepsis is enough to impress upon one the importance of the teaching that perineal drainage should always be employed after internal urethrotomy three or more inches from the meatus.—Surgical Suggestions.

In all cases of torticollis, look at the teeth and examine for caries of the spine.—Surgical Suggestions.

ADENOIDS.

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[Read before Ohio State Medical Association.]

Adenoids, or as they are frequently called, adenoid vegetations, are due to a hyperplasia of the normal lymphoid structure which occupies the vault of the pharynx, the pharyngeal or Luschka's tonsil. Macroscopically the adenoid is a soft, slimy mass, much resembling the faucial tonsil. Microscopically, we find it covered by columnar, ciliated epithelium. It is lymphoid in structure, with a fine reticulum of connective tissue, containing numerous small blood vessels, and enclosing lymphoid spaces varying in size. The glandular nature of the growth has led to the name sometimes given, pharyngeal adenoma or papilloma.

We know of no one cause for its existence. Any condition which may cause an engorgement of the mucous and sub-mucous capillaries will predispose to its development. Thus, acute colds, or coryzas, the acute infectious diseases, obstructed nasal passages, long-continued exposure to unfavorable hygienic surroundings may all be factors in its etiology. We know that in early life the epithelial and lymphoid structures are particularly prone to be affected by catarrhal and hyperplastic processes. And so we find that this is essentially a disease of childhood, most cases occurring between the third and fifteenth years. It occurs with about equal frequency in the two sexes. Climate plays an important role in that frequent and sudden changes in the weather conduce to frequent coryzas. Any constitutional disorder or dyscrasia which may promote congestion of the mucosa may become of etiological significance in the history of these growths. Tuberculosis, syphilis, struma, gouty or rheumatic diatheses would be classed in this category, their causative influence arising from the disturbing effect they have on normal nutritive processes, and the predisposition of the individual to recurrent attacks of acute catarrhal inflammations. Thus we see that a variety of conditions may stand in a causative relation to the affection, no one of which can be blamed alone in any given case.

Adenoids by reason of their position in the naso-pharynx, obstruct nasal respiration, and therein lies the chief evil of the disease, as practically all of the resultant symptoms are directly or indirectly due to this obstruction. That nasal respiration is necessary to the welfare of the growing child is an undisputed fact. Dr. Willis

S. Anderson, in one of the March numbers of the Journal A. M. A., gives the results of some very interesting experiments undertaken to prove this fact. His experiments were carried on with the lower animals and as there is some anatomic difference between the throats of these animals and the human throat, the results he obtained cannot be relied upon fully as applying to nasal obstruction in humans. They are valuable, however, and I believe can be recalled here with profit. He says in part, "The histologic structure of the nasal passages in animals and man shows their use for respiratory purposes. The nasal passages are arranged to warm, moisten and filter the air before its entrance into the lungs. The mucous membrane of the whole tract is lined by columnar, ciliated epithelium, while the buccal cavity is lined by flat epithelium; it can be seen, therefore, that the respiratory tract is specially fitted for its peculiar function, while the mouth is in no way adapted for respiratory purposes." He goes on to give the results of his experiments as follows: "Complete closure of the nostrils of guinea pigs is followed by death in from twenty-four to forty-eight hours. Partial closure of the nostrils of guinea pigs is followed by death in from a few days to several weeks, according to the degree of obstruction, the age and the resistance of the animal. Rabbits with one nostril closed died after losing about one-half in weight. In a series of ten the average duration was forty-three and six-tenths days. Partial closure of the nostrils of dogs is followed by symptoms resembling asthma and emphysema. The resistance of the younger dogs is lowered to such an extent that they die from infection, and the lungs were found to be diseased in every case examined. The anatomic difference between the throats of animals and man should be considered before transferring the results obtained from these experiments, but a careful study of my patients, over a number of years, has led me to the conclusion that the nose of man, as of the lower animals, is the organ through which the current of air should pass, and that even a moderate degree of obstruction to free nasal breathing is injurious." I feel sure that we will all agree with Dr. Anderson in the above conclusions.

Patients with small adenoid masses, or those in the early stages of adenoid growth, who cannot breathe comfortably through the nose, but who are still able to force air through the nasal passages, will very easily fall into the habit of breathing through the mouth. They may for a time breathe through the nose, but the obstruction makes respiration a task, and either because they tire of the forced inspiration or because they do

not get sufficient air in this way, they are compelled to open the mouth for occasional long breaths. Thus we have the beginning of mouth breathing and following this the other evils in their order. First comes the frequency of colds to which the mouth breather is subjected and the dry throat and husky voice or the voice that tires easily; then, too, we have the excessive secretion of tenacious mucus which drops into the throat and irritates it, causing a hacking cough. There is also a sensation of a foreign body in the nose or naso-pharynx and the patient may be seen trying to dislodge it by forcible expiration through the nose or by frequently swallowing.

As the adenoids increase in size nasal respiration becomes more difficult and the patient, tired of the effort, and having by this time become more accustomed to mouth breathing, resigns himself to it entirely. Now come the more serious sequelæ—first a slight deafness may be noticeable, the patient losing much of ordinary conversation, and this condition is very often the first thing noticed by the parent, and it is in this stage that the physician can be of greatest help if he will but make careful examination into the causative condition and institute proper treatment for it. These children are so often brought to the doctor for a slight deafness when, the classical picture of the adenoid victim has not yet been painted into the facial expression, and if the doctor be careless in his treatment of these cases, great harm may result. If on the other hand, he is thorough in his examination and treatment he can usually expect excellent results and earn for himself the lasting gratitude of both patient and parent.

In this connection I wish to report a case which illustrates several phases of the subject. Miss P., age twelve, a robust girl of brunette type, consulted us first in December, 1908. She gave a history of having had the ordinary diseases of childhood. Never had any aural trouble until the beginning of the present illness, which dates back about four years, when she became conscious of a slight deafness. She also noticed that for some time prior to this she had been subject to frequent colds, which were very persistent and hard to get rid of. She had no pain in the ear and complained of no discomfort, other than the slight deafness. No treatment was undertaken at this time, though a physician was consulted for the colds and deafness. Condition continued for three years, during which time deafness increased slightly. About a year ago, for no reason which can be discovered, either as to cold or acute illness, and without any pain whatever, the left ear began to discharge. Patient was treated for about

three weeks by her family physician and then consulted a specialist. After a few weeks' treatment, during which time she made no improvement, she was advised to go to the hospital and have her adenoids removed, which advice was accepted. A slight improvement was noticed after this operation, but the ear continued to discharge and she was advised a little later to have a mastoid operation done for the cure of the middle ear disease. This the patient and her family refused to do. She came to us in December, 1908.

Examination: Right ear seemed to be in quite normal condition when examined, both subjectively and objectively. The left ear showed a large quantity of pus and detritus filling up the the external meatus which after cleansing disclosed a large perforation of the drum membrane. The malleus was intact. Inside the tympanic cavity large masses of granulation were plainly to be seen and palpated. Perforation of the drum extended to the superior margin, giving access to the attic of the tympanic cavity. There was no tenderness on deep pressure and no history of any symptoms indicative of any involvement of the mastoid. The large perforation of the drum showed that there had been good drainage of the middle ear cavity. Catheterization showed the eustachian tube to be patent. The whole examination led us to believe that there was a limitation of the disease to the tympanic cavity. After examination patient was told that if the disease was limited to the tympanic cavity, as we believed it was, and if they would permit thorough exenteration of the same through the external auditory canal, there were many reasons for believing that the ear could thus be cured without the necessity for the graver mastoid operation. A few preliminary treatments were advised that we might be sure that treatment alone would not avail. The advice was taken and patient was treated from December 3 until December 27 without material improvement, when under ether anesthesia the remains of the malleus and the incus were removed, the whole tympanic cavity thoroughly curetted and afterward cauterized with pure lactic acid; subsequently treated every few days until the end of February. She had been given directions for the treatment of her ear at home and was reporting at that time only at intervals of a few days. At the time of the last report in February, drum had begun to be repaired and was rapidly spreading over the subjacent granulation. At this time she suffered a severe sprain of the ankle by being thrown from a pony and was unable to report in person for about three weeks, though

treatment was constantly kept up at home. On March 23, or three weeks after the injury, patient came to our office when both myself and my associate, Dr. Timberman, were much surprised to find that in the meantime the drum had completely re-formed, covering the whole of the space, and that the hearing faculty had been entirely restored, patient distinctly hearing a whisper at twenty-five feet.

Now had this patient been properly examined and treated when the slight deafness was first noticed, all of the later troubles might have been avoided, as I have no doubt whatever that the first symptoms were due to adenoids. Three years later when the adenoids were removed the damage to the ear had been done and the removal of the adenoids, while a very proper procedure even at that late time, was not followed by the improvement desired. That the little patient was so fortunate in the ultimate result of the operative treatment is all very well, but when we consider that all of her trouble might have been prevented, the importance of thorough examination for, and early removal of adenoids become apparent.

This case also shows clearly the next step in the progress of the disease, namely, the production of a middle ear inflammation. It was formerly thought that this was due to the direct closure of the nasal orifice of the eustachian tube by pressure from the adenoid mass. Grayson and others, however, contend that it is not due so much to closure of the eustachian tube but to the fact that the nasal passages are no longer used and there is no current of air accessible to the tubes. Hence, no ventilation of the middle ear can be accomplished. A catarrhal process extends into the tube and tympanic cavity with its attendant dangers. No one, who has seen a bad mastoiditis or a brain abscess from the extension of a severe otitis media, can possibly belittle the dangers attendant upon even a mild otitis. The cure of an otitis media purulenta in the presence of adenoids is almost impossible, and very many cases of otitis might easily have been avoided had the adenoid obstruction received proper attention. Nor is this the only danger in this region from obstruction by adenoids, for we find that the disease of the nasal passages will predispose to the development of other causes of obstruction, namely, hypertrophied turbinates and polypoid growths. With the development of these comes the danger of trouble in the accessory sinuses, frontal and ocular headache and disturbance of vision. Many cases go to the oculist with minor grades of refractive error, that are relieved entirely of their ocular trouble by the removal of

the adenoids and the restoration of nasal respiration.

With the foregoing changes come anatomical changes in the mouth and face which give to these patients a characteristic facial expression. The high arched palate, the pointed upper jaw, the drooping lower jaw and retracted chin, the pinched nose with sunken alæ, and dull lustreless eyes all conspiring to give the patient a decidedly stupid appearance, amounting, at times, almost to one of imbecility. These changes may precede all other symptoms or they may be late in following those above mentioned.

It is but a short step from the affection of the upper air passages and the closure of the nose, to the affection of the major respiratory organs, the lungs. We find the results of this extension of the trouble in many instances. The lungs do not receive their proper complement of air. They are not fully expanded as they should be and a shrinkage occurs, allowing or inducing a change in the conformation of the chest—or chicken breast. Bronchitis, asthma, pneumonia, and tuberculosis are frequent sequellæ, and I have no doubt that many victims of the Great White Plague could trace the origin of their trouble directly to nasal obstruction from adenoids. And with the lungs receiving a diminished supply of air, the blood is but imperfectly oxygenated. Thus are produced the anæmias and with them the retarded growth and development, the mental torpor and stupidity, or some other form of nervous disorder, and these are symptoms which oftentimes first bring the patient for examination.

I recall a case which had been treated for months for enuresis. Finally, the parents consulted me for some apparent nasal obstruction. Adenoids were found and removed and the enuresis disappeared as if by magic. This is not at all an uncommon experience, that is, for a case to be brought to the office for some remote result of the adenoid condition, and where the real condition has not even been suspected. It is an easy matter for the physician to content himself with the treatment of these symptoms, but he may treat them eternally and if the symptoms under treatment are the result of nasal obstruction from adenoids, his treatment will be unavailing unless the adenoids are first removed.

With the air hunger and its resultant anæmia, the child is predisposed to all sorts of infectious diseases and the vitality of the patient so reduced that the chances of withstanding the ravages of intercurrent affections is very greatly reduced.

The diagnosis of the condition is a very simple matter. The facial expression and the mouth breathing make it almost unmistakable. But pre-

sumptive evidence such as this, while strong, is hardly strong enough for radical procedure in operative treatment. The diagnosis, however, can be easily confirmed by one or both of the following methods. First, by the use of the rhinoscopic mirror, where this can be accomplished, the growths can be distinctly seen in the naso-pharynx. This, unfortunately, is not always possible even in older children, and almost never in young ones. The easier and better method is with the examining finger. A little patience may be required to gain the child's confidence, but this can usually be done and the examination made quickly and with little pain to the patient. A folded towel or the thumb well wrapped with a towel will serve admirably as a mouth-gag. Then with someone to steady the child's head, the index finger is passed quickly but gently back of the soft palate and the pharyngeal vault thoroughly explored. Not only the presence of adenoids can be definitely determined, but their extent, size, and position can be ascertained as well. In this way the diagnosis can be made absolutely positive.

The treatment resolves itself into one word, removal. No amount of local or general treatment will cure the patient of adenoids. Get the child in the best possible condition for operation and then thoroughly clean out the naso-pharynx. No fixed rules can be laid down as to the instruments or technique that shall be used in all cases. The operator must be guided in this by the size, extent, and position of the growth, as well as by the size and shape of the naso-pharynx. The essential thing is to be thorough, and in order that one may be sure that the growth has been removed entire the finger should again explore the pharyngeal vault with special reference to the fossæ of Rosenmueller.

The question of anæsthesia,—whether the operation be done with or without it, and the choice of an anæsthetic is still much discussed. Here again, no one rule will apply to all cases. In little babies of three years or under, the growth is small and soft, and can often be removed by the finger, and where there are no hypertrophied tonsils to be removed, the child can be held by an assistant and the operation done without any anæsthetic. The pain is of short duration and in such young children the nervous organism is not well enough developed to be severely shocked by the pain and fright. In older children, up to fourteen or fifteen years of age, I believe a general anæsthetic advisable, as I consider the shock following the operation without anæsthesia, particularly in a highly organized and sensitive child, to be worse than the dangers of anæsthesia. In

husky boys and girls of fourteen and fifteen and over, who can be reasoned with, and who have some nerve, local anæsthesia can be used with good results. Cocaine, or any of the other local anæsthetics, injected into the adenoid mass through the soft palate, or rubbed on the mass by means of an applicator, will sufficiently anæsthetize the growth to render its removal practically painless. Here, also, it becomes necessary to consider the removal of tonsils at the same time. It is very rare that we find adenoids without more or less hypertrophy of the faucial tonsils. And where the two coexist, I believe it always advisable to remove both at the same time, unless there be some very marked contraindication. This may also be done under local anæsthesia in the same class of patients as above described.

In the treatment of adenoids it is always well to remember that they may be either the cause or result of other forms of nasal obstruction. Hence, if we expect perfect results, we must see to it that all other causes of nasal obstruction are removed. In addition to this, the general health of the patient should be looked after.

The prognosis in these cases is almost uniformly good; I would go further and say that there is no class of cases in which more gratifying results follow any course of treatment than the children operated for adenoids. The reason for this is very evident; we have a mass of soft tissue obstructing nasal respiration, thereby causing a long chain of unpleasant and dangerous symptoms; we remove the obstructions and if the condition is not of too long standing, the symptoms disappear rapidly, the child develops physically and mentally. The child and the parent are equally cognizant of the benefits derived and their gratitude is usually unbounded.

The points which I want especially to emphasize are: First, the importance of adenoids as a causative factor; second, the dangers of neglect in the early and thorough removal of the growths; third, the importance of early diagnosis; and fourth, the importance of thoroughness in the removal of the growth.

In hydrocele the base of the tumor is below, in spermatocele it is usually above. A milky fluid obtained by aspiration usually speaks for spermatocele.—Surgical Suggestions.

Avoid the use of hydrogen peroxid in wounds of the neck. It is too adpt to dissect up the loose cellular planes. The same warning applies in many cases of cellulitis of the hand or foot.—Surgical Suggestions.

THE CAUSATION OF EXTRA-UTERINE PREGNANCY.

JAMES W. ROWE, M. D.

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[Read before the Ohio State Medical Association.]

The actual cause of extra-uterine pregnancy has been the subject of much investigation and speculation, and it can scarcely be said that all of this investigation and speculation have succeeded in discovering a fact or evolving a theory which is entirely satisfactory to the medical profession as the essential cause of this affection. They have not been, however, entirely fruitless, inasmuch as they have brought to light many interesting details which have an important bearing on the subject, even if they do not satisfactorily explain it for all instances.

Analysis of many cases shows that the accident of ectopic gestation is commonest between the ages of 25 and 35. Out of 651 cases collected from the literature, 389—practically 60 per cent.—occurred during this decade. The two halves of the decade do not differ very much. The five years from 25 to 30 showed 200, and the five years from 30 to 35 showed 189. The average age at which ectopic pregnancy occurs appears to be about 32.

Multiparae are more often affected than primiparae, and a system of averages shows that it is the third pregnancy which is most likely to be ectopic. Martin states that 89.9 per cent. occur in multiparae.

The influence of race is probably of no importance. The Japanese physician Iwase, of Tokio, states that there is no difference on this account between Japan and Germany.

Another point of great interest generally conceded to be true lies in the fact that ectopic gestation is likely to follow a period of sterility at the end of which a pregnancy supervenes, which is found to be ectopic.

This period of sterility varies greatly in duration, but taking into consideration a large number of histories, it appears to average about six years.

The three etiological factors enumerated above are the result of much observation and are generally considered to be facts, but of course they occupy a vague and general position as purely predisposing causes.

Extra-uterine pregnancy is often preceded by an abortion, which is followed by tubal disease. Or the abortion may indicate a pre-existing

catarrhal inflammation of the endometrium shared by the mucosa of the tubes, of which it is the result.

Preceding disease of the tubes is regarded by many as a predisposing factor of especial weight in the causation of ectopic gestation, and is regarded by some eminent gynaecologists as the definite cause of the trouble. Schauta, for instance, says that three-fourths of the cases are caused by pre-existing tubal disease and that this disease is generally gonorrhoeal in origin. He describes the disease as gradually ascending from the uterus and obstructing the isthmus portion of the tube, leaving the ampullar portion free to receive the ovum. This view, as might have been expected, has given rise to volumes of discussion and argument pro and con.

Tubal disease varies so much in extent. An actual pyosalpinx filling and occluding the tube would prohibit absolutely tubal pregnancy on that side. It is to the milder catarrhal inflammations that a role is assigned in the aetiology. Such catarrhal inflammations cause a swelling of the mucosa and thus obstruct, if they do not obliterate, the lumen of the tube. Or they cause infiltration of the musculature with subsequent formation of connective tissue which impedes its rhythmical contraction. They furthermore destroy the ciliated cells lining the tube, the cilia of which whip toward the uterus. The ovum is an inert cell. So far as we know, it does not possess the power of amoeboid movement. It passes down the tube by reason of forces exerted upon it by the tube wall and by the cilia of the epithelial cells. The loss, total or partial, of tubal peristalsis and ciliary motion removes the forces which urge on the ovum, while the spermatozoa, which progress by their own inherent motion, ascend more easily because the opposition of the cilia is absent.

A number of cases have been reported following operation to rectify retro-version. The drawing forward of the uterine fundus produced a kink in the tube which obstructed the passage of the ovum. In like manner, it is argued, peritoneal bands, resulting from pelvic peritonitis, may constrict the tube or polypi or small fibroids may block its lumen. And finally, diverticulae and false passages have been described into which the ovum has found its way. It is probable that these latter were produced by the eroding action of the ovum itself.

The theories which make disease or deformity of the tube the essential factors in the causation of ectopic gestation resolve themselves into two:

1. Disease of deformity of the tube so de-

creases its diameter that the ovum is blocked in its downward course.

2. Disease annihilates the forces which propel the ovum forward.

In connection with these two propositions, certain observations must be taken into consideration. The lumen of the tube must be or must have been sufficiently patent to permit the passage of spermatazoa. Absolute blocking would prevent impregnation. It must also be established by the clinical history of the case that the pathological condition in the tube preceded the ectopic pregnancy and did not result from it.

In connection with the obstruction theory, Tarturier, Mandl and Schmidt experimented upon rabbits. They ligatured the tube at the uterine end in rabbits shortly after copulation. In no case did extra-uterine pregnancy result. If, however, the horns of the uterus were ligated, pregnancy did occur on the tubal side of the ligature. This would seem to prove that in rabbits at least an obstruction in the tube does not cause tubal pregnancy.

The disease theory is open to a very pertinent objection. If the mucosa of the tube is so damaged that it cannot perform its nominal functions, it is doubtful if an ovum would lodge on it. We know that endometritis is a very common cause of sterility, and if the ovum will not lodge in the diseased endometrium, it can scarcely be expected to lodge in the diseased mucosa of the tube. Schauta's theory of ascending inflammation would be difficult to controvert, because he presupposes disease of the isthmian portion of the tube with still normal ampullar portion.

Diseased conditions of the ovaries have been blamed for extra-uterine pregnancy on the ground that a diseased ovary would produce an abnormal ovum. In opposition to this, it is argued that an abnormal ovum would either not develop at all or would certainly not develop as far as many examples of extra-uterine pregnancy.

The failure to evolve a satisfactory theory from the pathology of the maternal parts has led to the attempt to fix upon the ovum the blame for the accident of ectopic gestation.

It is supposed that some of the cells of the discus proligerus cling to the ovum when it is set free from the Graafian follicle and that these cells prevent the ovum from sticking in the tube. If the cells are wholly wanting, or if they become too soon detached, then the ovum sticks. This would be about as hard to disprove as to prove.

It has been suggested that on account of delay

in descent or on account of too rapid growth, the ovum has become too large to pass the isthmus of the tube; in other words, the obstruction theory is modified to lay the blame upon the ovum instead of the tube. The whole obstruction theory is weakened very much by the often observed fact that the ovum is found attached so far out in the tube that it could not yet have felt the force of an obstruction. Furthermore, from the time of fertilization to the time of embedding, the ovum increases little if any in size. The original cell divides and subdivides, but the resulting cells are smaller and smaller and their aggregate bulk is scarcely larger than that of the ovum itself.

Others have suggested that an abnormal roughness of surface has led to failure of the ovum to pass the tube. It is questionable if the ovum showed such early pathological tendencies whether it would ever develop at all.

The explanation given by Hitschmann and Lindenthal is extremely clever. It was formerly supposed that when the ovum reached the uterus it lodged on the surface, in a fold of mucous membrane, which then grew up and embraced it, forming the decidua reflexa. Peters showed that this was not the case. On the contrary, the ovum erodes the mucosa and sinks into it, so that it comes to lie in the adenoid tissue. In the phenomenon of embedding, the uterine mucosa is passive; the ovum is active. The ovum, from the time of its impregnation, leads a parasitic existence. The maternal tissues do not voluntarily pour their nutritive fluids into a passive ovum, but an active ovum sucks its nutrition from passive maternal tissues.

The time between the fertilization and implantation of the ovum is definite for any species of animals. This phenomenon has been studied in the case of lower animals with great thoroughness, and has been found to be so definite that, to quote a German authority, it may be observed "mit der Uhr in der Hand"—"with the watch in the hand"—so exact is the period for each particular species. If at the stage of development at which it naturally begins to erode the mucosa, the ovum has not yet reached the uterus, it implants itself in the tube. This it can do because the tubal mucosa is similar to the endometrium. It is somewhat differently arranged, yet the essential elements are the same. It is lined by a similar epithelium; it is an adenoid membrane; it is crowded with cells identical in size and cytological structure, and Strassmann demonstrated that it undergoes a monthly congestion in connection with ovarian irritation. Here the ovum can embed itself, but it must have a mem-

brane identical with or very similar to the uterine mucosa. This is a strong argument against the possibility of a primary abdominal pregnancy. If there has been delay in the progress of the ovum after its fertilization so that the stage is reached at which it is capable of embedding itself, it erodes the spot at which it is located, provided this is a membrane capable of receiving it. The causes of delay need not always be the same. They may be purely accidental. We do not know just how or why the ovum gets into the tube at all. We have good reason to believe, however, that it occasionally happens that an ovum freed from one ovary gets into the tube of the other side—external migration. This process would undoubtedly cause delay, yet we are hardly in a position to assert that it is the only cause.

It has been asserted that peritoneal fluid circulates in such a manner so to wash the ovum toward the tube and that this circulation is promoted by the whipping of the tubal cilia. Injury to the cilia disturbs these peritoneal currents and the proper descent of the ovum is interfered with.

The causes of delay must remain theoretical, but if the ovum is in the tube when it reaches the stage at which it embeds itself it will locate there and never reach the uterus.

It may be mentioned, in closing, that the Hitchmann-Lindenthal theory sheds light upon the etiology of another pathological condition. Presupposing that the time between fertilization and embedding is fixed, if the descent of the ovum is unduly rapid, it fastens itself too low in the uterus, with the resulting condition of placenta prævia.

THE AFTER CARE OF THE INSANE.

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Columbus.

[Read before the Ohio State Medical Association.]

The object in bringing the subject of the after care of the insane to your notice is to show what has been accomplished along this line of work in other states and to cite the need of such in our own. That such a work is needed in Ohio cannot be doubted but so far practically nothing has been done.

The after care work was inaugurated with the object in view of assisting those in charge of state hospitals, by improving many existing conditions and coping with emergencies which constantly arise in the routine of such work.

Any new line of work undertaken by those connected with state offices or institutions is liable to close scrutiny as to its advisability or feasibility and as to the probable returns for the money invested. It has been proved that the after care agents while engaged in following their line of work accomplished much good in various ways for the state hospitals. These different features I wish to outline more extensively.

The state hospital for the insane has for years past been the recipient of much undue criticism. In some instances it was no doubt well merited. There have been and always will be mistakes and at times mismanagement in this as in other lines of work—but even this does not warrant the exaggerated expressions of distrust so frequently heard in connection with the subject of the state care of its unfortunates.

It has been found that the agents of the after care committee in their frequent contact with ex-patients and friends of patients, by proper explanation and education place the hospital in its proper and just light before the people of the community in which they visit.

This subject is of necessity of most interest to those concerned directly with the institution caring for those mentally aberrated. The crowded conditions of our present hospitals behooves us to adopt some measures to relieve the congestion and assist in the better care or treatment of those in our charge. Coupled with this is the fact that many cases of mental disease, who either because of association with old companions, recourse to former habits, lack of self attention or kindred causes recur, notwithstanding the fact that they left the hospital in good condition both physically and mentally. Superintendents knowing these facts, fear to discharge some cases even though they have recovered mentally.

In every hospital excepting possibly those for the acute insane, there are many cases who remain in the institution merely for custodial care. Many of these cases could under the proper conditions be cared for outside.

At this time I wish to cite and state briefly some facts in regard to ten male cases who would beyond doubt be suitable cases for after care work. They are selected at random from our records at the Columbus State Hospital; the cases having been residents all of or part of the time from April 1, 1907, to April 1, 1909.

Of the ten, three are dementia præcox cases, two are manic depressive, one an imbecile, and four are alcoholics.

Case No. 1 has spent since April 1, 1907, 273 days inside and 458 outside the hospital, going

in and out on several trial visits. His home surroundings are not pleasant or agreeable and not in the least conducive to his well being. His mother does not exercise proper judgment in her care of him.

The boy usually returns to the hospital of his own accord and is at once placed at some light employment and allowed to go about the grounds unattended. He is never quarrelsome while in the hospital and is withal a case who could without doubt spend much more of his time outside if the proper environment was created for him.

Case No. 2. This case has spent 220 days in 511 days outside. He was a young man who was admitted in a more or less maniacal state and for several months was regarded with anything but a hopeful prognosis. He had a short time previous to his commitment been deeply engrossed in school work and expected upon his discharge even against the advice of the physicians to again engage in the same line of work. This case should have had some one to advise him in regard to the kind of occupation best suited to the retention of his good mental condition.

Case No. 3 has spent all of the past two years in the hospital. During the past five years he has made at least two attempts to find some employment in the city. He has succeeded, but when he attempts to assume the necessary responsibility incident to his independent existence, he cannot stand the strain and returns to the shelter of the hospital. He is a young man of good habits and under proper home environments would no doubt lead a very happy life.

Case No. 4 is a case of manic depressive insanity who has been in and out of the hospital for at least six different trial visits since his first commitment December 1, 1902. Since April 1, 1907, he has spent 351 days inside and 380 days outside, the time being almost equally divided. He is a farmer who owns quite a large farm with always an abundant amount of work on hand. He is rearing a family and always does much more work than is proper. As a rule he returns to the hospital in a more or less disturbed condition, reduced physically, bowels constipated, etc. He has so far refused to come to the hospital for advice while on trial visits and is a case that would profit abundantly by having some agent call on him with timely advice as to the proper care of himself.

Case No. 5 is another maniacal case who has been in the hospital under two distinct commitments. The last period he was in the hospital but sixty-seven days. His occupation is that of

a blacksmith and during the busy seasons the patient works both day and night, neglects his physical welfare, develops insomnia and delusions, becomes maniacal and returns to the hospital. He is a case in which advice is very necessary.

Case No. 6 is one of imbecile basis. Occupation blacksmith. He has made several trips to the hospital, staying for greater or less periods of time. During the past two years he has spent 292 days in the hospital. As soon as he recovers from the excited condition in which he generally returns, he is placed at work and under proper medical supervision gets along very well. When at home, owing to poor home surroundings and the need of a dependent family, he is of necessity compelled to work much more strenuously than he should.

Cases 7, 8, 9 and 10 are selected from the different classes of alcoholics in the hospital. They have been patients since 1902, 1891, 1893 and 1903, respectively. All of them have spent the last two years continuously in this institution. These are cases of at least the average mentality, some more than the average. Some have held important and responsible positions. Two of them have no homes but the hospital and are hardly of sufficient judgment and will power to make a separate livelihood, but under proper home surroundings would live comfortably for the remainder of their lives.

To summarize: We have ten cases of different kinds who have during the past two years spent collectively 4858 days in the institution. How many of these days could they have spent outside had there been suitable surroundings, proper companions, some one to advise them and to look after their personal welfare? Estimates are only matters of conjecture. After surveying the cases and studying them with their many characteristics, it seems both fair and reasonable to suppose that one-fourth of the total time could have been saved to these unfortunates. Granting such to be the case, it means a total of 1214 days. The average daily per capita cost of keeping each patient during the years 1907-1908 was approximately 48 cents, so that the cost of keeping our ten cases the 1214 days was \$582.72. We all realize how fallacious figures are at times, but we have cited the above amounts merely to show that the subject of after care is a vital one if it is judged from a pecuniary basis alone. It certainly is not economy in any sense of the word to keep within a hospital patients who are in no further need of treatment, and who cannot be cared for as cheaply there as they can be outside. To view the subject from the humanitarian standpoint, the basis from which it should be judged,

we have no right to allow such conditions to exist.

During the past year the total cost of the entire after care work in New York was \$1700. For next year they asked \$2500. If one institution with ten cases alone could have been benefited nearly \$600, does it not look to be purely a business matter to make some efforts to remedy such defects. The state is certainly not justified in keeping under restraint, in no matter how modern or well equipped the hospital may be, chronic and harmless patients who can be more cheaply, more comfortably, and as, or even more, safely cared for under outside influences. The state has certainly been negligent in this one respect. One of the first objections to the work is to find places of employment either for those who have recovered or for those who are of the harmless chronic classes. Several different lines of work have been proposed for such persons. In some localities the experiment of placing insane patients in farm dwellings has proved of marked benefit both from the medical as well as from the financial standpoint. The cases are exceedingly well pleased to return to home life and take far more pleasure in such living than they do in the dances, entertainments, etc., of the usual hospital routine.

The objection of the commonwealth that homicide, suicide or some other casualty would take place, is far from being proved. So far, as a rule, these accidents are far less common in the free out of door life than they are in the places of restraint. For over forty years Scotland has had her dependent insane in private dwellings, and now boards out at least 23 per cent. of this class. In some cases it has been found feasible to have old attendants or nurses who have left the hospital work to take cases into their homes at a very nominal cost. These persons more readily understand the mentally sick and can do more to assist them to a rapid recovery.

Some institutions allow their patients who have recovered and have no homes to become employes at a greater or less salary. They make their homes in the hospital under the conditions best suited to them until such opportunities as they desire arise and they are able to go out into the world, shouldering the necessary responsibilities of their existence in the struggle with their fellow creatures. Any mental case that is cured should be regarded in the same light as the normal individual and should have sufficient work of a kind adapted to each individual case.

As New York and Massachusetts have taken perhaps more interest in this work than the other

states, I wish to state briefly what they have done.

The care of insane in private families was first inaugurated in Europe about 1850, and in Massachusetts between the years 1880-1885. John E. Fish states that during 1907 there were 267 patients, 13 men, 254 women, living with families outside of state hospitals. They were living with unquestionable advantage to themselves and without injurious influences upon others.

The work has been carried on actively in New York during the past three or four years. At the present time they have various committees and sub-committees who look after the patients discharged from the different hospitals.

The officers of the hospitals work in conjunction with these committees and assist them as much as possible. A short time before the case is to leave the hospital the fact is reported to the agent, who investigates the home life, the surroundings into which the case is about to enter, and whether or not suitable employment is at hand. Many times the statement that a case is discharged to the care of his family means but little, as the home surroundings are very poor and in every way deleterious to his continued good health. His dismissal under such conditions means a far greater hardship than remaining in the hospital.

The after care committees look into such conditions and try to remedy them so that relapses and returns to the hospital may be prevented. After the case has left the hospital the agent makes periodical calls on the patient, inquires into his welfare, gives suggestions and if necessary has the case reported to the hospital for advice and treatment. The patient and patient's friends in practically every case feel very kindly toward the agent. They know that some one is interested in them and as a rule the agent is kindly received into the home. Conditions are freely discussed and evils remedied. The agent is able many times to relieve any feeling of uneasiness about the patient's treatment while in the hospital and to assist in effacing the prejudice that exists in the minds of the laity in regard to such institutions.

The small hospitals with their few patients can quite easily come in touch with the home life of the individual case and find out wherein some of the causative factors of the patient's mental condition may lie, but with the large hospital such is not the case. So much the more need of some investigating officer or agent. The case that is ready to be discharged needs advice as to his future, as to his home life, the company

he expects to keep, and the work he expects to follow. The physician can give such advice, but there is need of some one to see that his advice is followed. For at least two reasons it has been found advisable and more profitable to employ agents who were not in any way connected with the hospitals. First, the patient's friends feel more freedom in discussing the patient's welfare with such parties and, secondly, in the usual hospital none of those fitted to do such work have the time to devote to it.

The time was, and not many years since, when the unfortunate, who in many cases through no fault of his own was afflicted with some mental disease, was considered as the leper, one to be shunned, a hopeless wreck, a derelict of society. He in many cases could not find a haven with his family doctor, for even he was only too glad to shift the care and responsibility incident to the welfare of the "crazy man" to the shoulders of some other individual. But the dawn has certainly broken for the insane. With the present modern facilities the percentage of recoveries in the usual hospital, excepting those for chronic or epileptic insane, ranges from 20 per cent. to 30 per cent. of the cases admitted. There can be no doubt but that our methods now in use will to those of the next generation seem crude indeed, but the constant aim of the alienist is to use every means that comes under his control to further the work of caring for his brother in distress.

The after care agent gives him another avenue of help. With this means of assistance the percentage of recoveries can be increased and the work begun for the individual while in the hospital can be carried on outside until the patient is once more the useful member of society that he was before his disease developed.

It is hard at times to overcome the prejudice of employers, some of whom will not employ under any circumstances a person whom they have known to be insane. Many will receive them on certain conditions, while some are broad-minded and optimistic enough to assist such cases to their former stations in life. There are numerous insane cases neither destructive nor dangerous, who were cared for at home many years. While at home they were neither feared nor shunned by their friends or neighbors; but as soon as they are committed to a hospital for the insane the token of disgrace is placed upon them, too often to remain for life.

Mental cases realize these handicaps and many of them prefer to remain in the hospitals rather than to go out and labor against such odds. Many relapse on account of trivial things con-

nected with their work, incidents which could have easily been adjusted by some one who has an insight into their past and present existence.

In perhaps no special class of cases is the after care work needed any more than in the alcoholics. The constantly increasing numbers that are being sent to our hospitals, as a rule for short periods only, is appalling. As one sees such cases admitted, in a few weeks improve or for the time recover, leave the hospital, and within a few days become intoxicated by associating with their old companions, he certainly has a very narrow mind who cannot see the need of some one to assist such patients.

If we are to conserve the beneficial results of hospital care, to treat the patient justly and wisely with full knowledge of his past existence and due regard to his future welfare, not as though he were an outcast, an isolated unit, but recognizing his duties to his family and other members of society, we must make some provision such as after care for those who may need it.

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DISCUSSION.

Cecil George, Dayton: It is my misfortune not to have heard all of the doctor's paper and all of the characteristic features he stated. I only heard the latter part of his paper. Therefore, I am not in position, really, to discuss the merits of the paper. Very sorry indeed that I did not hear the paper, because it is a question in which I am much concerned, and a question that should interest psychiatrists as well as the general practitioners—not only the profession but the people in general.

The insane patient is quite a problem—from the time that he manifests any symptoms at all until the time he is pronounced cured and even then he is a problem. It is quite a problem to settle sometimes, just when the patient should be taken to an institution on account of social or financial conditions. Many times the family is averse to having a relation taken to an institution when it may be for the good of the patient. It seems to me, though, when a patient becomes a menace to his family or to society, there should be no hesitation.

Then, it also becomes a problem when he should be released. There is a great diversity of opinion about this matter. I believe in some institutions the rule is followed, that the patient is not to be patrolled or given even a trial until his discharge. Of course that is a matter of opinion. My own personal opinion from observation is that the patient is often very much benefited by being given a chance or, we might say,

a trial discharge. It often times is a great encouragement.

Of course, after the patient is discharged, then comes up the same question again, of his relationship to his family, to society and to himself. He stands very much in the same position as he did when he was committed, or when the symptoms were first manifest.

Not being able to hear the doctor's paper, I am not able to discuss its features, but I want to say I am very much pleased that the doctor has been kind enough to hand me his paper to read.

H. H. Shirer, Columbus: This is a question which has received what you might call more or less recent consideration. It has been somewhat of a policy to erect mammoth institutions as symbols of public benevolence, but we can hardly keep pace to the utmost in that line.

The State of New York has a private organization known as the State Charities Aid Association, which, nevertheless, is under some legislative jurisdiction and must make its reports to certain existing governmental bodies, which took up the question of the after care of the insane. After several conferences with the State Commission in Lunacy, the Lunacy Commission finally gave their consent to a plan. It has been in a more or less experimental stage, but so far the association seems pleased with the results, and from what I can find, those in charge of lunacy affairs of that state feel that it is a promising proposition. I feel that if the work of that private society through its, I might say, voluntary agents, would prove successful, in time the State of New York will take that up at state expense.

In Massachusetts it has been handled by the Commission in Lunacy, or the Insanity Board, I think they call it, and they even go so far as to pay for placing these persons in private homes, and even then, as I heard a doctor say in a paper before the National Conference of State Charities at Minneapolis, it is a paying proposition for the state. The average cost is a little less than \$2.50 per week, or you might say in round numbers \$125 a year. While the doctor was reading his paper I made a little calculation. The salary and expense would be \$2500 per year, and it would cost on the boarding plan \$125 per year, and considering the average per capita expense in the institution of \$175, there is a saving of \$50 per patient. It would be possible, then, for one agent to reach all these placed out people and break even with the state; and I cannot see why one agent could not care for more than fifty people.

Personally, I feel that the agent ought to be an employe of a hospital. He ought to be a physician, and there should be a close relationship between the institution or hospital and the patient. Those people need medical advice. They need industrial aid, and a great many other things.

I might say also, in the State of Massachusetts they have largely confined their work to women of the age of fifty and over. They have not felt safe in placing women of child bearing age out in the public, and so have taken that class. They have confined themselves almost exclusively to women for the simple reason that they have thought men could be employed more profitably about the institutions.

In conclusion I might say this: Our state governmental bodies are employing agents to look after paroled men. It is said that these paroled men could not secure employment because they were convicts and there is a prejudice against convicts. But these agents claim they do not have great difficulty in securing employment for them. It helps to re-establish these men under their relationship to industry and to society, and it is proving itself valuable many times in that particular line of work.

Why cannot the same thing be done for those who have become mentally out of joint with society? The longer these stay in institutions, the more, I believe, they get out of joint, so to speak, to get back to the industrial and social point. I hope this consideration and look into the future may, in time, bring forth fruit which shall give to hundreds of people the joy of living under normal conditions, because no institution is like a home, however well it may be managed.

E. C. Brown, Massillon: I believe we should institute some method for the after care of the insane, especially in America. As we know, America has been very tardy and slow to take up this feature in the care of her insane. One New York physician has remarked, and the doctor has the same idea in his paper, that the insane after discharge from a hospital and after returning home, are generally ostracised; and we need some society or individuals to look after just such cases—cases that are discharged from the hospital—to lend them a helping hand, as it were, and re-establish them in their social and industrial spheres.

I believe several years ago I had a talk with Secretary Shirer about just such a line of work as this—and this work, of course, would have to be, in the main, philanthropic and financed from private sources. This has been found to be necessary in the Eastern states, where this feature of the work has been instituted. I believe this work should be rather general, and under the jurisdiction of the state charities; and the hospital physicians and charity associations should work in conjunction. It has been suggested, at one time, that some assistant physician should be appointed, and he should be delegated to visit the patients who have been sent to homes on trial visits. It should be his duty to aid and advise, concerning such patients, in the hope of preventing relapses, and if any are in need of immediate treatment, steps should be taken at once to have them sent to a state hospital, where they will receive the best possible care and attention.

G. H. Williams, Columbus (closing): I have but little more to say. Mr. Shirer spoke about homes and family care. It has been found since the plan has been adopted of placing the patients in homes, that the committees have had far more applications for patients than they have been able to supply. Certainly, there is a very large need of something being done and it certainly looks as though the time was ripe for some action.

An attack of acute intestinal obstruction, with passage of blood, and in the presence of a cardiac lesion, is suggestive of thrombosis of a mesenteric vessel.—Surgical Suggestions.

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THE SIXTY-FIFTH ANNUAL MEETING.

The sixty-fifth annual meeting of the Ohio State Medical Association will be held in Toledo on the 11th, 12th and 13th of May, and present indications point to a record-breaking meeting not only in attendance, but in the character and variety of scientific papers to be presented.

The local committee has been making great preparations, and profiting by the experience of the past, have looked after details in the most systematic way, so that the most convenient and agreeable provisions for the meeting have been made that are possible to obtain.

The entire medical profession of Toledo is a unit in extending a cordial invitation to every member of the Association to attend this year. The Toledo Academy of Medicine is one of the most progressive medical societies of the state. It stands for the very best in medical organization and this opportunity of visiting it in its own town will be a matter of pleasure and profit to the members of the Association.

The city itself is well worth a visit and in the month of May it will be at its best. The citizens have wonderfully preserved their trees of the original forest growth, so that

next month it will be embowered in green, and with its many large and handsome homes, it is truly beautiful. For more practical minded visitors it presents the largest and safest harbor on the lakes, immense steel and iron works, tremendous docks, famous cut glass works, splendid office buildings, hotels, etc., etc.

As stated elsewhere the magnificent new Hotel Secor will be the headquarters for the meeting, but several other excellent hotels in close proximity will offer very comfortable and convenient quarters, so that every one will be able to secure accommodations within easy reach of all of the meetings.

The House of Delegates, the Council Headquarters, the Registration Office and the Exhibits will be in the Hotel Secor. The section meetings will be held in the magnificent new Y. M. C. A. Building, which is centrally located within a few minutes walk of the hotels.

On another page will be found a preliminary program which will give an idea of the excellent character of the papers to be presented. The Council this year has taken an active interest in the program and an unusual number of high class and at the same time very practical papers will be provided.

An unusual number of guests also have been invited, who will offer special addresses on timely subjects. Can you afford to miss this meeting?

The railroad facilities are excellent for reaching Toledo from most parts of the state, so let every one resolve to attend if possible. There is no one who is not better fitted to take up his work again after attendance on such a meeting as this one promises to be. He who is too busy to attend our annual meetings is losing more than he knows.

This will be the first visit of the Association to Toledo since 1902; the invitation is hearty and the preparations for our entertainment have been lavishly made; let us show our hosts that their efforts are appreciated and turn out *en masse*. Now is the time to begin to make your plans. Let the 11th, 12th and 13th of May be marked down in your engagement books, and resolve to let nothing short of Halley's comet or something equally portentous interfere with a record breaking attendance this year.

CYTODIAGNOSIS.

C. F. Hoover, of Cleveland, in a recent address before a county medical society, emphasized the value of lumbar puncture and examination of the spinal fluid in many conditions, but especially in obscure cases of syphilis of the central nervous system. The operation undertaken under proper precautions has been entirely without danger or unpleasant consequences in his hands in over 250 cases; the main requirement according to Dr. Hoover, in addition to the ordinary antiseptic technic, is the insisting that the patient maintain a recumbent position for from twelve to fourteen hours after the puncture.

The fluid obtained should be centrifuged as promptly as possible, with the instrument revolving not too rapidly—about 1000 revolutions per minute—and the sediment ex-

amined for leucocytes. In an afebrile case any marked predominance of lymphocytes is an almost positive indication of syphilis. Under Dr. Hoover's observation this method has proven more satisfactory than the Wasserman reaction, and he quoted Noguchi as testifying to its value, more or less unconsciously when he mentions the lymphocytosis as a control in his method. Dr. Hoover cited several cases of obscure nervous conditions coming to him with, respectively, various and varied diagnoses, which showed a lymphocytosis on lumbar puncture and examination of the spinal fluid.

His diagnosis of syphilis in such instances was verified by brilliant results after a thorough course of mercurial treatment.

The importance of such a simple method can hardly be estimated. The complicated Wasserman reaction and its modifications are open to such opportunities for error as to preclude their use by any but skilled laboratorians, and even in their hands hemolysis is such an uncertain quantity and so readily affected by extraneous influences, as to necessitate the most careful control for every step. The recognition of the presence or absence of a lymphocytosis in the spinal fluid is relatively so simple that it should become a frequent test and its merits thoroughly tried out on a large scale of cases, which will prove its true value. It promises much and is worth the trial.

LEGALITY OF THE ELECTORAL SYSTEM OF THE A. M. A.

The Lancet-Clinic in a recent editorial takes the stand that "the manner of electing officers (in the American Medical Association) is illegal upon the face of it"; implies that the present system is the source of advantage to the city members, and suggests that a "direct vote, at the time of registration, by those in attendance, should be introduced."

Upon just what facts or premises our esteemed contemporary bases these conclusions it is difficult to understand. The American Medical Association has never been an independent society; from its very inception it has been composed of delegates and members, the latter, as such, never having any title to anything more than to take part in the scientific discussions and to receive the Journal.

The basic principle of the Association has always been that it should be the exponent of the medical profession of the United States, and in order to carry out this idea, according to American principles, the representative plan was adopted and the franchise conferred on all members of affiliated medical societies, which were given one delegate for every ten members. There has been no change in *theory* or *principle* since the foundation of the Association. Members of affiliated societies, although not members of the national association, were entitled to vote for delegates to the same by virtue solely of their membership in their local societies, just as citizenship in this country confers upon a man the franchise rather than taxpaying qualifications.

The representative plan is still in force but simply established on a more convenient and equitable basis. This country of ours is one of magnificent distances. By far the greater number of those attending the annual sessions come from the immediate vicinity and surrounding territory; in the days before the re-organization this gave the local members undue influence or even, often, a controlling majority. This was manifestly unfair. The meetings were usually held in the larger cities, and for years these practically dominated the entire association. In many cities there were numerous societies all in affiliation with the A. M. A. and entitled to representation; as for instance, in Chicago in 1901 there were seventeen of such with nothing to prevent one man from belonging to several or all

of them and having a vote for delegate for each membership. Every man also who belonged to his local and state society had one vote for each membership, and so on, the reduplication of voting was only limited by a man's disposition as a joiner of societies.

Under the present plan every member of a county society has one vote for the delegates to the State Association; the delegates to the latter elect delegates to the national body. This simplifies matters and establishes a firm and equitable basis. It is consistently American and democratic.

Insofar as accruing to the benefit of the cities is concerned, quite the reverse is really the case. For instance in our state a combination of any five or six county societies with an average membership of but twenty members respectively, will have the same representation in our State Association as Cleveland or Cincinnati and equal say as to the selection of delegates to the A. M. A. In other words, an aggregate of five or six score in the sparsely settled counties have equal voice with five or six hundred in one city.

Lastly; as to conferring the direct vote upon every subscribing member of the A. M. A., consider the possibilities for transacting business with an attendance of six or eight thousand! Consider also under such conditions how easily the majority influence could be established by local members. Such a system would be absolutely unfair and in any body claiming a national character, would be un-American, impractical and leading only to disaster and dissolution.

EDITORIAL NOTES

THE LITERARY DOCTOR.

The Strand Magazine for March, 1910, has a prize medical story. This magazine inserted an ad in the British medical press offering a prize of £50 for the best medical story, fact or fiction, not to exceed 6000 words, written by a qualified medical man. A very large number were received and the prize awarded to one by Dr. J. Bart Rus of St. Lancet, entitled "Under the Microscope." It is a mixture of house surgeons, nurses and love. A mixture of microscopical slides awards a case of cancer of the tongue to a young

man, who had just been refused by a nurse the night before, instead of an innocent ulcer. The nurse, who hears that he is doomed to amputation of the tongue and a probable death from cancer later if he survives the operation, repents and accepts him, which she intended to do, probably, anyhow, when asked again. The mixing of the slides by the careless assistant is discovered, and they lived happily ever after. It is not a bad story. The editor of the *Interstate Medical Journal* for March, 1910, thinks it is, and criticizes it severely. In fact, he mentions physicians enthralled by the lure of gold and rushing into print with stories that are "as hollow as a ghost, as dim and meager as an ague fit." The editor not only criticizes J. Bart Rous for his literary effort but, I think somewhat unjustly, takes to task the whole medical profession for daring to enter the realm of literature at all. The many sickening attempts of pretentious laymen at literature, the editor passes by as unworthy of contempt, but is deeply concerned and moved to pity by the deplorable reiterations which doctors perpetrate upon us on account of their persistence in publishing medical stories. He considers no case of recent date as flamboyant, regarding these palpable defects, as "Under the Microscope." We think the editor has done an in-

justice to the story, to the author, to the profession. Who more than the doctor of medicine of a quarter of a century can recall more experiences which would make stories not only true but stranger than fiction? Many doctors are eminently fit and also pre-eminently capable from experience for the very best of literary effort, as has well been shown. We have a striking example in Dr. Otto Juettner of Cincinnati, whose "Daniel Drake and His Followers" but recently appeared, his textbooks on psychotherapy and his numerous writings, medical and lay, show his diversabilities. We might also add the name of the late Dr. J. T. Whittaker of Cincinnati, and Dr. A. G. Drury.

The editor writes as if he were a bit sore, like he had tried for that prize and failed. If he did, he deserved to fail, for who would expect that prize limited to a qualified medical man ever to get outside that tight little isle. We would commend *The Strand* for its enterprise, and hope that our readers will procure and read the story, and that magazines on this side will make similar offers, and that the medical profession will compete for these prizes. Those interested might read "The Surgeon in Romance," Cernezz, *Revue Mensuelle de la Presse Medicale Italienne*, Milan, December, 1909. E. S. McKee.

The Monument to Ether Presented to Boston by Thomas Lee

On the four sides of the base of the monument appear the following inscriptions:

NEITHER SHALL THERE
BE ANY MORE PAIN

REV.

△ △ △

TO COMMEMORATE THE DISCOVERY
THAT THE INHALING OF ETHER CAUSES
INSSENSIBILITY TO PAIN FIRST
PROVED TO THE WORLD

AT THE

MASS. GENERAL HOSPITAL
IN BOSTON,

OCTOBER, A. D. MDCCCXLVI

△ △ △

THIS ALSO COMETH FORTH
FROM THE LORD OF HOSTS
WHICH IS WONDERFUL IN COUNSEL
AND EXCELLENT IN WORKING

ISAIAH

△ △ △

IN GRATITUDE FOR THE
RELIEF OF HUMAN SUFFERING
BY THE INHALING OF ETHER
A CITIZEN OF BOSTON
HAS ERECTED THIS MONUMENT
A. D. MDCCCLXVII

△ △ △

THE GIFT OF THOMAS LEE



THE NEXT ANNUAL MEETING

The 1910 meeting of the Ohio State Medical Association will be held on the 11th, 12th and 13th of May, in Toledo. This will be the sixty-fifth annual meeting, and it promises to be an exceptional one in many ways. The scientific program as thus far reported is an excellent one. A great deal of interest has been manifested during the past year, and applications for space came in so early that nearly all of the sections had practically their programs filled by the first of the year. The section officers have sought to make their respective meetings as attractive as possible with the result that extremely interesting and well balanced programs have been prepared.

The local committee has not fully completed its preparations, but the plans thus far outlined promises a most enjoyable session, with excellent arrangements for the comfort and convenience of members in attendance.

HOTELS.

Toledo possesses an unusual number of excellent hotels so that the visiting members may be assured on the point of comfortable and conveniently situated accommodations.

HEADQUARTERS.

The headquarters will be in the magnificent new Hotel Secor.

Here will be the registration office, the meeting place of the House of Delegates and the Council, and the exhibits.

The general sessions and the section meetings will be held in the Y. M. C. A. Building, which is centrally located and within easy reach of all of the hotels.

The following hotel rates have been thus far offered:

Hotel Secor (European Plan), \$2.50 and upward; two in a room, \$1.25 each and upward.

With characteristic hospitality the Business Men's Club will mail to every member a card like the following:

CONVENTION VISITOR'S CARD

NO. _____

THE BUSINESS MEN'S CLUB
TOLEDO, OHIO

IS ENTITLED TO ALL THE
PRIVILEGES OF THE CLUB

UNTIL _____

ALL CLUB EXPENSES PAYABLE IN COUPONS
ISSUED IN \$1.00, \$2.00, \$5.00 BOOKS
UNUSED COUPONS TO BE REDEEMED AT END
OF CONVENTION

This entitles each holder to all the privileges of

the club during the meeting. The building is centrally located, and will serve as a delightful resting place between meetings; certainly this most hospitable and courteous offering by the club will add much to the pleasure and comfort of visiting members of our Association.

PROGRAM.

A preliminary program is herewith submitted, which while subject to minor changes, has been approved by the Council and will be substantially as given.

SPECIAL ADDRESSES.

Special attention is directed to the addresses to be made by the guests of the Association at this meeting. The names of these distinguished members of the profession are sufficiently well known to be a guarantee of the character of their addresses. Their presence will prove a great attraction and will enhance the interest of the program. These will include:

"Medicine—Circulatory Changes in Exophthalmic Goiter," by Albion W. Hewlett, Professor of Internal Medicine, University of Michigan, Ann Arbor, Mich.; "Laboratory Diagnosis in the Past Ten Years," Francis Carter Wood, Professor of Clinical Pathology, Columbia University, New York City.

Annual Oration—"Pleuritis as a Complication of Lobar Pneumonia, Its Significance and Treatment," James M. Anders, M. D., Philadelphia, Pa.

Surgery—"Trivialities and Progress," John F. Binnie, M. D., of Kansas City, Mo.

Eye, Ear, Nose and Throat—"Concerning Some Ocular Manifestations of Cardio-vascular and Renal Diseases" (illustrated with stereopticon views), George Lord de Schweinitz, M. D., Philadelphia, Pennsylvania.

Proctology—"Some Symptoms Which Lead to the Early Diagnosis of Cancer of the Rectum," Louis J. Hirschman, M. D., Detroit, Mich.

Dermatology—"Diagnosis of Skin Diseases," Grover W. Wende, M. D., Buffalo, N. Y.

Genito-Urinary Surgery—Sterility: The Cause and Operative Treatment in the Male," F. R. Hagner, M. D., Washington, D. C.

MEDICAL SECTION.

WEDNESDAY, MAY 11, 1:30 P. M.

(1) "Diagnosis and Treatment of Early Tuberculosis," John P. DeWitt, M. D., Canton. Discussion, C. B. Conwell, M. D., Mt. Vernon.

(2) "Report of Two Cases of Heart Block," L. C. Grosh, M. D., Toledo. Discussion, J. E. Greiwe, M. D., Cincinnati.

(3) "Laryngeal Ulcerations Following Intubation," J. McI. Phillips, M. D., Columbus. Discussion.

(4) "Report of an Interesting Case of Cirrhosis of the Liver," E. W. Mitchell, M. D., Cincinnati. Discussion, George A. Fackler, M. D., Cincinnati.

(5) "Some Phases of Pneumonia," Theodore W. Rankin, M. D., Columbus. Discussion, J. L. Tracy, M. D., Toledo.

THURSDAY, MAY 12, 9 A. M.

(1) "Types of Status Lymphaticus Met With in Cleveland," Wm. T. Howard, M. D., Cleveland. Discussion.

(2) "Precordial Percussion Tenderness as a Guide to Estimation of the Size of the Heart, and Tension of the Arterial Wall, Endo-Arterial Blood Pressure and Hypertonus of the Arterial Wall," Charles F. Hoover, M. D., Cleveland. Discussion.

(3) Special Address by Invitation—"Circulatory Changes in Exophthalmic Goitre. The Heart, Size of the Heart, Peripheral Dilatation of Vessels, Blood Pressure. Occurrence and Significance of Irregularities. Cause of the Circulatory Disturbances," Albion W. Hewlett, M. D., Professor of Internal Medicine, University of Michigan, Ann Arbor.

(4) Special Address by Invitation—"Laboratory Diagnosis in the Past Ten Years," Francis Carter Wood, M. D., Professor Clinical Pathology, Columbia University, New York.

(5) "The Protection of Child Life," Charles O. Probst, M. D., Columbus. Discussion, W. W. Brand, M. D., Toledo, and Herschel Fisher, M. D., Lebanon.

FRIDAY, MAY 13, 9 A. M.

(1) "The Clinical Significance of Non-Diabetic Acidosis," L. A. Levison, M. D., Toledo.

(2) "Diabetes Mellitus," John P. Sawyer, M. D., Cleveland. Discussions, J. Henry Schroeder, M. D., Cincinnati, and Frank Winders, M. D., Columbus.

(3) "Three Years of Serum Therapy in Epidemic Cerebro-Spinal Meningitis," Wm. S. Chase, M. D., Akron. Discussion, Marion Whitacre, M. D., Cincinnati.

(4) "The Exudative Erythemas and Their Visceral Manifestations," Mark A. Brown, M. D., Cincinnati. Discussion, E. W. Mitchell, M. D.

(5) "Syphilis of the Lungs, With Report of

Cases and Skiagraphic Demonstrations," R. P. Daniells, M. D., and H. W. Dachtler, M. D., Toledo. Discussion, Sidney Lange, M. D., Cincinnati.

SURGICAL SECTION.

(Wednesday Afternoon)

Robert Carothers, M. D., Cincinnati, Chairman.
William A. Ewing, M. D., Secretary.

(1) "Haematuria," William E. Lower, M. D., Cleveland.

(2) "The Ego in Surgery," Harold Jacobs, M. D., Akron.

(3) "Fractures Complicating Dislocations of the Shoulder Joint," Joseph Ransohoff, M. D., Cincinnati.

(4) "Infantile Paralysis from the Standpoint of the Orthopaedist," Alex. M. Steinfield, M. D., Columbus.

(5) "The Treatment of Hip Disease in Relation to Its Pathologic Mechanics," Henry O. Feiss, M. D., Cleveland.

(6) "A New Operation for Basedow's Disease," J. H. Jacobson, M. D., Toledo.

(7) "The Factors of Safety in Operations for Goitre," Geo. W. Crile, M. D., Cleveland.

(Thursday Morning)

(8) "A Consideration of Pneumonia With Abdominal Symptoms," H. J. Whitacre, M. D., Cincinnati.

(9) "The Natural History of Appendicitis," John C. Oliver, M. D., Cincinnati.

(10) "Etiology, Results and Treatment of Movable Kidney," R. E. Skeel, M. D., Cleveland.

(11) "Movable Kidney from a Medical Standpoint," M. J. Lichty, M. D., Cleveland.

(12) "The Movable Kidney from the Standpoint of the Genito-Urinary Surgeon," E. O. Smith, M. D., Cincinnati.

(13) "Penetrating Wounds of the Abdomen," Frank Fee, M. D., Cincinnati.

(14) "Ectopic Pregnancy with Report of Two Extreme Cases," Henry T. Sutton, M. D., Zanesville.

(Friday Morning)

(15) "Femoral Hernia," Geo. Goodhue, M. D., Dayton.

(16) "A New Method of Treating a Uretero-Cervical Fistula—Report of a Case," Earl Gilliam, M. D., Columbus.

(17) "An Ideal Surgical Treatment of Uterine Prolapsed," H. H. Hatcher, M. D., Dayton.

(18) "Prostatectomy," W. D. Hamilton, M. D., Columbus.

(19) "Further Consideration of Pancreatitis," C. N. Smith, M. D., Toledo.

(20) "The Cancer Problem as It Affects Women Especially," E. J. March, M. D., Canton.

OBSTETRICS AND PEDIATRICS.

"Infant Mortality: Its Principal Cause; Prophylaxis," A. F. Furrer, M. D., Cleveland.

"Some Factors in the Causation of Infant Mortality; Need of Their Elimination. How Done?" J. Morton Howell, M. D., Dayton.

"What Shall We do With the Baby in a Tuberculosis Home?" Richard A. Bolt, M. D., Cleveland.

"Medical School Inspection," J. H. McHenry, M. D., Cleveland.

"The Nutrition of Twins and Triplets," R. L. Jett, M. D., Cleveland.

"Congenital Syphilis in Pediatric Practice," Fred Beekel, M. D., Cleveland.

"Syphilis in Pregnancy," Wm. D. Porter, M. D., Cincinnati.

"Pyelonephritis, a Complication of Pregnancy," Harry R. Brown, M. D., Chillicothe.

"Albuminuria in Pregnancy," George P. Dale, M. D., Dayton.

"Appendicitis During Pregnancy and Labor," A. H. Bill, M. D., Cleveland.

"Etiology; Diagnosis; Treatment of Scarlet Fever; Report of Cases," F. P. Anzinger, M. D., Springfield.

"A Consideration of the Pneumonias of Children," George Chapman, M. D., Toledo.

"Obstetrics as It is Practiced," Mark Millikin, M. D., Hamilton, Ohio.

"Intestinal Intoxication," J. J. Thomas, M. D., Cleveland.

"Carbohydrate Idiosyncrasy in Infants," Allan Ramsey, M. D., Cincinnati.

"Gonorrhea in Infancy," H. E. Smead, M. D., Toledo.

"Typhoid Fever in Infancy," Albert Bell, M. D., Cincinnati.

"Vaccine Treatment of Cervical Adenitis," Oscar Berghausen, M. D., Cincinnati.

"The Causes and Management of Prolonged First Stages of Labor," F. S. Clark, M. D., Cleveland.

"Acute Yellow Atrophy of the Liver in Children, with Report of a Case," John Phillips, M. D., Cleveland.

"Tetany in Children, with Report of a Case," D. S. Hanson, M. D., Cleveland.

"The Relation of the Teeth in Children to Certain Nervous Phenomena; A Preliminary Report," John D. O'Brien, M. D., Massillon.

PROCTOLOGY.

The address of the Section Chairman, "The Development of Modern Proctology," by Wells Teachnor, M. D., Columbus.

Abstract: The subject of proctology has exercised the genius of medical men from time immemorial. The indifference of the general practitioner and the radical measures offered by the general surgeon has made its practice a lucrative field for the quack and irregular practitioner.

Since the advent of local anesthesia much of this work has been reclaimed for the profession. It is now recognized as a legitimate field for the profession.

It is the recognition of the demand from the public for more conservative methods.

The practice of modern proctology means, no detention in hospital or loss of time from pleasure or business pursuits, and the least suffering possible, consistent with the future comfort of the patient.

Annual Address—"Some Symptoms Which Should Lead to the Early Diagnosis of Cancer of the Rectum," L. J. Hirschman, M. D., Detroit.

Abstract: It is well known to every surgeon that early extirpation of a cancerous growth offers the best hope of permanent cure. If patients suffering from symptoms referable to the rectum were subjected to a proctoscopic examination as a routine measure, pre-cancerous conditions would be diagnosed early enough to allow of successful operative interference.

From the histories of the author's cases he has selected the symptoms which were common to all of the cases at the commencement of the disease. Various gastric disturbances and constipation are common precursors of rectal cancer. Importance of proctoscopic examination in all cases presenting these symptoms emphasized. Brief histories of author's cases with reference to early symptoms.

"The Radical Treatment of Internal Hemorrhoids Without Anesthesia and Without Pain," James A. Duncan, M. D., Toledo.

DERMATOLOGY.

Annual Address—"Diagnosis of Skin Diseases" (Stereopticon), Grover W. Wende, M. D., Buffalo, N. Y.

Synopsis: Some of the different rare skin diseases will be demonstrated with the stereopticon. The commoner skin diseases will also be shown and dwelt upon at some length.

"The Extensive Syphilitic Ulceration of Tertiary Nature," A. Ravogli, M. D., Cincinnati.

Abstract: Ulcerative process is the result of a necrobiotic decay of the infiltrating elements, caused by the presence of pathogenic microorganisms. In the tardy syphilis often extensive ulcerations are found, which are due to a gummatous infiltration in the corium. It is a late



localization of the treponema, which usually attacks parts exposed to irritation or to maceration from urine, from fecal matters, or from pathological secretions. The severity and the extension of the ulceration are due to the running down of the system, from poor nourishment, debility, which makes the skin thin and liable to be affected by the latent treponema.

Discussions by Robert S. Walker, M. D., Toledo, and H. B. Anderson, M. D., Newark.

"The Causes and Prevention of Premature Baldness," M. L. Heidingsfeld, M. D., Cincinnati.

Abstract: General classification of baldness and brief consideration of the various factors and influences of its production. Thallium acetate, X-ray, radium, and infections as causative agents. Eczema seborrhoicum and its causative effect. General observations regarding race, habit, and custom. Critical review of the literature. Consideration of the frequent and common causes of alopecia prematura. Cardinal

symptoms. Prophylactic measures. A more symptomatic, rational, simplified, and effective method of treatment.

Discussion by E. D. Tucker, M. D., Toledo, and Charles J. Shepard, M. D., Columbus.

"Radiotherapy in Dermatology, With Steropticon Demonstration of Cases," Walter Irwin Le Fevre, M. D., Cleveland.

Abstract: The evolution of radiotherapy. Biological effect of the Roentgen ray. Indications of its use. Therapeutic results obtained.

Discussion by William O. Roop, M. D., Dayton, and A. W. Nelson, M. D., Cincinnati.

"Report of the Committee for the Prevention of Venereal Diseases," Charles Melvin Harpster, M. D., Secretary.

Meeting of the committee and discussion of subject.

All members of the State Association and their guests are invited to attend this session if they so desire.

Discussion by Wells Teachnor, Chairman, Columbus; M. L. Heidingsfeld, Cincinnati; W. I. LeFevre, Cleveland; A. Ravogli, Cincinnati; Robert S. Walker, Toledo; William Lower, Cleveland; E. O. Smith, Cincinnati; Starling S. Wilcox, Columbus.

Annual Address—"Sterility—The Causes and Operative Treatment in the Male," Francis R. Hagner, M. D., Washington D. C.

Abstract: Causes of sterility, especially double gonorrheal epididymitis. A discussion of the operative treatment of this condition. Report of cases and results of operative treatment. Demonstration of the operative procedure on the testicle of the pig.

"Indications for Nephrectomy," E. O. Smith, M. D., Cincinnati.

Abstract: A general consideration of the symptoms that point to diseased or damaged kidney, such as pain, hematuria, pyuria, tumor, etc. Among the conditions on the part of the kidney that require its removal are hypernephroma, sarcoma, cystic, and poly-cystic degeneration, hydronephrosis, tuberculosis, calculi, pyonephrosis, and trauma. Differential diagnosis. Determination of the efficiency of the other kidney before operating.

Discussion by William E. Lower, M. D., Cleveland, T. M. Reade, M. D., Springfield, and S. J. Goodman, M. D., Columbus.

"Report of Cases of Arthritis of Gonorrheal Origin, and the Use of the Gonococcic Vaccine," Frank Oakley, M. D., Cleveland.

Abstract: A number of interesting cases will be reported in detail, and the technic of the use of the stock and autogenous vaccines will be gone into.

Discussion by J. W. Miller, M. D., Cincinnati. Clarence Ordway, M. D., Toledo, and Robert C. M. Lewis, M. D., Marion.

"Gonorrhea and Marriage," Starling S. Wilcox, M. D., Columbus.

"Intra-Vesical Operations—Phantom Demonstrations," Charles Melvin Harpster M. D., Toledo.

Abstract and Synopsis: The different operations will be discussed, and the different conditions of the bladder that can be reached by intra-vesical manipulation will be gone into. The limitations of the method will also be dwelt upon. The different cystoscopes will be exhibited and the Nitze operating cystoscopes will be demonstrated on the phantom; also the Bransford-Lewis universal operating cystoscopes. The different examining cystoscopes; the Luy separators; and the popular evacuators and stone crushers will also be shown.

Discussion by A. J. McCracken, M. D., Bellefontaine, and S. St. John Wright, M. D., Akron.

MENTAL AND NERVOUS DISEASES.

WEDNESDAY AFTERNOON.

1. Chairman's Address, C. D. Mills, M. D., Marysville.
2. "Role of Functional Conditions in Psychiatry," J. C. George, M. D.
Discussion, W. C. Kendig, M. D., Cincinnati.
3. "Prognosis of Traumatic Neuroses," Louis Miller, Toledo.
Discussion, W. D. Deuschle, M. D., Columbus.
4. "Epilepsy," D. N. Kinsman, M. D., Columbus.
Discussion, W. H. Pritchard M. D., Gallopis.
5. "Subtemporal Decompression for Cerebellar Tumors—Its Dangers," H. H. Hoppe, M. D., Cincinnati.
Discussion, H. H. Drysdale, M. D., Cleveland.
6. Paper, H. Brundage, M. D., Columbus.
Discussion, G. T. Harding, M. D., Columbus.

THURSDAY MORNING.

1. "Malingering and its Detection," E. E. Gaver, M. D., Columbus.
Discussion, C. F. Hoover, M. D., Cleveland.
2. Paper, B. F. Beebe, M. D., Cincinnati.
Discussion, W. B. Laffer, M. D., Cleveland.
3. "Carelessness in the Examination of Patients for Admission to State Hospitals," H. H. Dorris, M. D., Athens.
Discussion, C. H. Clarke, M. D., Cleveland.
4. Paper, D. I. Wolfstein, M. D., Cincinnati.
Discussion, Philip Zenner, M. D., Cincinnati.
5. Clinic at the Toledo State Hospital.
Special Address by Hugh T. Patrick, M. D., of Chicago.

PROGRAM EYE, EAR, NOSE AND THROAT
SECTION OF THE OHIO STATE MEDICAL SOCIETY.—EYE.

2 P. M., MAY 11TH.

1. "Resume of My Experience in India." Chairman D. W. Green, Dayton.

2. "The Instruments Used and Some Points of Technic of the Major Smith Cataract Operation." D. T. Vail, Cincinnati.

3. "A Comparison of the Old Cataract Operation With the New." C. G. Clark, Columbus.

4. "Further Observations on the Joint Removal of Capsule and Lens (Major Smith Operation)." Robert Sattler, Cincinnati.

Discussion opened by Louis Strickler, Cincinnati; A. R. Baker, Cleveland.

5. "The Etiology and Pathology of Chr. Simple Glaucoma." E. H. Porter, Tiffin. Discussion opened by Charles Lukens, Toledo.

6. "Some Observations on Car Nausea." Wylie Ayers, Cincinnati. Discussion opened by William B. Van Note, Lima.

7. "The Fergus Advancement Operation for Ptosis." Edward Lauder, Cleveland. Discussion opened by C. L. Minor, Springfield.

8. "Choroidal Atrophy in Myopia." (Original water colors; lantern slides.) William S. Keller, Cincinnati. Discussion opened by Charles C. Stuart, Cleveland.

9. "Bi-lateral Dermoid of the Eyeball, with Report of the Case." H. K. Stoll, Cincinnati. Discussion opened by A. L. Steinfeld, Toledo.

10. "Some Facts Concerning Tests Used in Latent Muscular Deviations—Suggestions of New Nomenclature." J. E. Cogan, Cleveland. Discussion opened by William E. Bruner, Cleveland.

8 P. M., MAY 11TH.

Address by George Lord de Schweinitz, Philadelphia, "Concerning Some Ocular Manifestations of Cardio-Vascular and Renal Diseases."

9 A. M., MAY 12TH.

1. "Pathological Conditions of the Nose,

Throat and Ear as an Etiologic Factor in Degeneracy." Royce D. Fry, Cleveland. Discussion opened by Francis W. Blake, Columbus.

2. "Hyoscine as a Prevention to Cocaine Poisoning and as an Adjunct to Cocaine Anesthesia: Based on Eight Hundred Cases." Myron Metzbaum, Cleveland.

3. "The Possible Abuse of the Eustachian Catheter." J. B. Alcorn, Columbus. Discussion opened by William C. Davis, Columbus.

4. "Non-Operative Treatment of Otitis Med. Pur." W. L. Carroll, Youngstown. Discussion opened by Mark D. Stevenson, Akron.

5. "Intra-Tracheal Injections." (Demonstrations.) Thomas Hubbard, Toledo. Discussion opened by John M. Ingersoll, Cleveland.

6. "Nystagmus as Related to Diseases of the Inner Ear and Cerebellum." William B. Chamberlin, Cleveland. Discussion opened by Samuel Allen, Cincinnati.

7. "Mastoid Operative Methods and Prognosis as Influenced by Labyrinthine Disease." J. E. Brown, Columbus. Discussion opened by C. R. Holmes, Cincinnati.

8. "Cerebellar Abscess, With Case Report." William Mithoefer, Cincinnati. Discussion opened by J. W. Murphy, Cincinnati.

CASE REPORTS, EXHIBITS, ETC.

"Laryngo-tracheostomy for Laryngo-tracheal stenosis—Presentation of Case." Louis F. Smead, Toledo.

"Demonstration of Radiograms of the Mastoid." Samuel Iglauer, Cincinnati.

"Report of Two Cases of Naso-Pharyngeal Fibromata." William B. Chamberlin, Cleveland.

"A Clinical Adenoid Demonstration of Dr. Hays' Pharyngoscope." G. L. King, Alliance.

CLINIC, 2 P. M., MAY 12TH.

Lecture and demonstrations of Jackson tubes. Chevalier Jackson, Pittsburg.

Smith Cataract Operations. By Green, Vail, Clark, and Sattler.

MEDICAL ECONOMICS

By J. W. CLEMMER, M. D.

NATURE'S CREATION.

The A. M. A. Journal in the March 5th issue has exposed Nature's Creation, a nostrum advertised to cure tuberculosis with home office in Columbus. The same preparation has exploited in Chicago, until three years ago, as a cure for syphilis, and the only medicinal content of the nostrum is potassium iodid. The mode of advertising is a cut of the *cured* patient with testimonials and display type setting forth the claims of "*tuberculosis*" or *consumption positively cured*"; *over 300 cured cases in Columbus*," with no mark to indicate advertising matter.

The evil influence upon the sick is seen not only in the payment of \$5.00 for a package estimated to cost twenty cents, but in the reports of the District Nurses and physicians and the tuberculosis dispensary. The faith inspired by newspaper exploitations of the nostrum among tubercular subjects often repudiates the teachings of the nurse, resulting in refusal to accept efficient means of recovery and in the infection of other members of the family.

"A. D. S." stands for American Druggists Syndicate," of which there are 12,000 members in this country, and forty-nine in Columbus. They make and advertise to the public, "1,000 standard household remedies." Here are samples: "The A. D. S. Hepatic Salts is very far-reaching in its action. It is essentially a system cleanser and it works principally on the stomach, liver and bowels. It corrects indigestion when it arises from a torpid liver. It overcomes constipation and induces a healthy action of the bowels. It assists the kidneys by diverting a portion of the functions of these organs to the skin and bowels—hence is very beneficial in all cases of kidney trouble." "Almost a specific for gravel; supplies the normal constituents of the body which have been decreased by the malady (tuberculosis, scrofula and the wasting diseases) and greatly improves the appetite, and general health. For gout, rheumatism and uric acid poisoning, this remedy is extremely reliable and brings relief very rapidly."

This is medicinal practice short circuited in the hands of professional men who are intrusted to furnish medicines on the order of physicians. The evils of substitution have been changed to include diagnosis, prescription and patient.

The dignity and function of pharmacy as a profession seem to have degenerated into a trade. The patronage of ethical pharmacists should be the policy of physicians in order to protect their patients from the wily ways of the A. D. S. type.

MEDICAL MILK INSPECTION.

A medical milk commission should be established in every county of the state. No more important or philanthropic service could be rendered the community by the county medical society than to provide a pure milk for infant and invalid feeding. It is surprising to know how many cities are consuming dirty milk. Of the seventy-five cities in Ohio, comparatively few are provided with milk safeguarded by official regulation through veterinary inspection of dairies and laboratory examinations of dairy products. The people need milk protection just as much as fire or police protection. The high infantile mortality due to improper feeding and impure milk is well known. Strangely enough, people submit to unsanitary conditions without protest. They fall victims of their own destruction by the creation and toleration of unsanitary conditions of air, water and food. This tripod of human existence requires official regulation to restrict morbidity and mortality due to the faulty methods of supply. The technical knowledge of physicians in sanitary matters imposes an obligation to teach the public prophylaxis. The medical milk commission is a means to that end. It is preventive medicine put to work.

The first step toward establishing a milk commission by a county medical society is to educate the public in the worth of pure milk supply, especially as related to infant feeding. Social organizations in every city are available for this purpose. Members of such organizations should be placed on the commission with representatives of the county society. The production of a "certified milk" entails an extra expense for in-

spection and laboratory work. This expense is covered by the sale of bottle caps bearing the approval of the society issued to the dairymen who qualifies under the dairy rules established by the National Association of Medical Milk Commissions. A veterinarian, on inspection at intervals, enforces the rules for milk production and the bacteriologist tests samples from delivery wagons. The bacterial count must not exceed 10,000 per c. c. This standards plus chemical tests insure a pure milk. A low temperature and cleanliness are necessary to a low bacterial content. These are secured by the dairy rules.

In any city where a milk commission is not possible, physicians should at least urge municipal regulation of the milk supply. Combined veterinary and laboratory service under the local board of health is possible in every city and should be maintained in the interests of public health.

THE CHEERFUL RECEPTION ROOM.

That a great many physicians' offices are furnished and adorned in execrable taste is the observation of Dr. L. W. Flanders, Dover, N. H. (Bulletin Beacon Hill Hospital Staff). He says that if he were a layman, and above all a patient waiting to have a boil lanced, he doubts if he should enjoy the contemplation of Dr. Tulp's dissection in Rembrandt's "Lesson in Anatomy." He once spent a few minutes in a doctor's waiting-room, the walls of which roared "shop" at him. The "Lesson in Anatomy" was there, and worst of all, a photograph of the doctor himself at the operating table of some post-graduate school. The apron, the rubber gloves, the soiled sponges, the scurrying nurses all stood out in sad reality. In the consultation room he was confronted with a glass case full of glittering steel, and he said to himself, how can a patient stay through all this?

In the hospital nowadays the patient never sees the grim preparations of the operating room nor the surgeon in his ghostly panoply. Why not extend the same method to the office? Let the waiting room be bright and cheery, the walls hung with beautiful pictures, the chairs easy and the table furnished with entertaining literature, and above all, let the place be clean. Given a dirty waiting room, it is hard to believe that an aseptic surgeon dwells behind the door of the consulting room. All surgical instruments should be hidden in cabinet drawers, and soiled cotton and dirty sponges be buried in the depths of the waste-box.

MEDICAL EDUCATION AND REPORT OF THE COMMITTEE ON MEDICAL LEGISLATION OF THE AMERICAN MEDICAL ASSOCIATION.

Held in Chicago. Feb. 28-March 2, 1910.

Heretofore the annual conferences on medical education and medical legislation have been held at different times and places. Since the work of the two conferences was so closely related, however, and since many delegates were being asked to attend both, it was determined this year to hold the conferences of these two committees of the American Medical Association at the same time and place. This joint conference met at the Congress Hotel at 10 a. m. and was called to order by Arthur Dean Bevan, Chicago, Chairman of the Council on Medical Education.

ADDRESS OF CHAIRMAN.

Arthur Dean Bevan, Chicago: We are called together for the purpose of improving the medical educational standards. Many of us here know the difference between the modern intelligent medical care and the ignorant charlatan care of the sick. (1) We have seen the woman dying of child-bed fever which might have been prevented by the intelligent aseptic conduct of her confinement. (2) We have seen the child dead from unrecognized and untreated diphtheria, when the death might have been prevented by early laboratory or intelligent clinical diagnosis and the proper use of antitoxins. (3) We have seen the pinched and dusky face of the man dying of peritonitis, which could have been prevented by early diagnosis and proper operative treatment. The public does not as yet realize the importance of public health measures and of measures aimed at securing properly trained medical practitioners.

From a study of the subject of medical education during the last eight years, I desire to present to you briefly some conclusions:

1. Medical education and medical educational standards are not in a satisfactory condition in this country, and, although great improvements have been made in the last ten years, conditions as a whole are unsatisfactory.

2. It costs more to conduct a modern medical school than the amount which can be obtained from students' fees. The sixty or seventy schools which should survive must receive either state aid or private endowment.

3. The medical school of the future must be developed as the medical department of a university.

4. The study of modern medicine demands: (1) A certain preliminary education; as a minimum this should be eight years in the primary school; (2) four years in the high school; (3) at least one year in special preparation in the pre-medical sciences of chemistry, physics and biology; (4) four years in the medical school, two years in the laboratories of anatomy and physiology, pathology and pharmacology; two years in clinical work in medicine, surgery, obstetrics and the specialties; and finally (5) at least one year of practical work as an interne in

a hospital. And the time has about arrived when provision should be made for including this hospital year in the medical course.

5. The state licensing boards of the various states should have the legal power to insist on a proper preliminary education and a proper medical course, and they should have the right to refuse recognition to work done in colleges not offering proper medical instruction and the examination for medical licensure should be of such a practical character and so thorough as to determine the ability of the applicant to practice medicine. This power is necessary in order to protect the people of the state against ignorance and quackery. No public health measure is of greater importance than that aimed at securing properly qualified medical practitioners.

6. In order to secure proper medical standards throughout the country we must have the united support of the state boards, the medical profession, the medical schools, the universities, and, what is most important of all, public opinion.

7. In order to obtain this support we must carry on a campaign of education showing what the existing conditions are and what changes are needed in order to secure conditions which will best safeguard public health, secure proper medical attention for the sick and aid in the advancement of medical knowledge.

SECRETARY'S REPORT: INSPECTION OF MEDICAL COLLEGES.

N. P. Colwell, Chicago: All the work done by the Council on Medical Education since it was created in 1904 has been focused on the investigation of medical colleges preparatory to issuing a classification of medical schools. In making the investigation, the chief aim has been to point out reasonable standards of medical education and to assist the colleges in any way it could in the fight many of them have been making to keep pace with the advances, which through modern methods of research have been made in knowledge of the causation and treatment of disease.

Following the first tour of inspection, the Council was criticised in certain quarters for not publishing outright its classification of medical colleges. That classification was not published, however, because the Council desired to give a number of colleges which were contemplating improvements the opportunity to make good. The delay has been more than justified. Many colleges have made extensive improvements, numerous mergers have been brought about, and, on the whole, the situation has been greatly improved. The general conditions as revealed by the first inspection, however, were given the widest possible publicity, so that at the present time any plea of ignorance of the demands of modern medicine is unworthy of consideration.

Including pseudo-medical colleges, there is an amazing variety of institutions professing to teach medicine in whole or in part which are annually turning out thousands of graduates who seek the privilege of practicing medicine. While some of these graduates may be thoroughly competent, there are doubtless many who are illiterate, untrained, and decidedly incompetent. While they may differ greatly in their theories of disease and their methods of treatment, those

who by whatever means secure the right to practice will be alike in this respect: they will all be required to differentiate between the normal and the abnormal; they must determine the nature of diseases, injuries and deformities, and in many of their cases what they do or fail to do will mean the life or death of the patient.

The point to be borne in mind is that an osteopath is required to make a diagnosis just as a medical practitioner is, and therefore needs a similar training in the fundamental medical branches. Lower educational standards for osteopaths, therefore, are a serious menace to the public and an unfair discrimination against medical practitioners. Regarding osteopathic colleges also it should be stated that owing (a) to their lower preliminary requirements, (b) to their shorter course for the osteopathic degree, (c) the few instructors in their faculties who have had a scientific medical training, and, more important still, (d) to the serious if not absolute lack of laboratory equipment and clinical facilities, not one of the osteopathic colleges in the United States can be compared even with those medical colleges which have been rated far below 50 per cent by the Council on Medical Education.

The only legal barrier which can protect the public from ignorant, untrained, and incompetent practitioners is the state medical licensing board. It is of extreme importance, therefore, that in each state there should be a single licensing board, that its members should be selected because of their special fitness for the work involved and that this board should be given full authority in the premises. Instead of that we now have in our forty-nine states and territories eighty-two different boards of medical examiners including the sectarian boards. In some states the responsibility for defending the public against ignorance, incompetence and fraud is divided among as many as four separate boards. The time has come, however, when the medical profession and the people of each state should see to it that a single board of competent medical examiners shall control the licensing of all practitioners of medicine and that this board be given full authority. This one barrier between the sick and afflicted and the crowds of ill-trained and incompetent practitioners must be made effective.

REPORT OF THE SPECIAL COMMITTEE ON PRACTICAL TESTS AT STATE LICENSE EXAMINATIONS.

W. S. Fullerton, St. Paul: After about a year's trial in their respective states, your committee finds the practical examination on certain subjects in the curriculum for state licensure eminently satisfactory. The state boards which have adopted it began in a tentative way, but experience leads the committee to believe that it is capable of considerable extension and development and worthy of universal adoption by state examining boards. The committee believes that the practical examination, more than any one thing, compels the candidate for license to come before the board with real knowledge in the subjects to which it is applied, obtained by well-directed work, and that it effectually does away with the "quiz-compend applicant"

superficially and specially crammed to meet the ordinary written examination.

Your committee recommends that state examining boards shall require practical examination in the following subjects: Diagnosis, pathology, histology, bacteriology, urinalysis, obstetrics, and anatomy. While this may sound formidable, the committee is convinced that it is feasible. For example, on the basis of 100 applicants a physical diagnosis examination can be completed in five hours by providing ten subjects, taking the class in relays of ten, each to examine one case and to be allowed half an hour for such examination. The practical in anatomy can be carried on concomitantly, each relay passing from one to the other. The committee recommends that the present written examination in anatomy (which is necessarily book anatomy) be dispensed with and a practical examination consisting of a description of prepared specimens be substituted, believing that one such specimen correctly described is of more value as a test of anatomic knowledge than ten answers which may involve only the question of memorizing from a quiz compend. The committee also recommends that the practical examination in histology, pathology, and bacteriology shall consist in the identification of a sufficient number of microscopic slides and gross specimens. The committee further recommends that there shall be a practical chemical and microscopic examination of one or more specimens of urine.

PRACTICAL EXAMINATIONS IN OHIO.

George H. Matson, Columbus: In a supplementary statement Dr. Matson, a member of the committee, called attention to the results of practical examinations which were inaugurated by the Ohio board in June, 1908. Since that time applicants' grades in the laboratory branches show a marked improvement over the grades given before such tests were adopted. The examination of blood, sputum, feces and stomach contents is also suggested. Examination in clinical medicine may be inaugurated by presenting cases of readily recognized heart and lung lesions, enlarged liver and spleen in satisfactory subjects, syphiloderms and easily recognized skin diseases. In anatomy, the applicant may be asked to indicate and name points of interest on a given bone, to outline the various organs in the living subjects, and to locate points of interest that may be required of him.

In obstetrics, the manikin may be used, and it is suggested that the applicant be required to demonstrate and diagnose positions and to demonstrate the treatment of abnormal position. He should also be required to demonstrate the use of the pelvimeter. Practical work in refraction may also be added. Six examiners could examine seventy-two applicants in six hours.

TUESDAY MORNING SESSION.

REPORT OF THE COMMITTEE ON ORGANIZATION OF A STATE BOARD OF MEDICAL EXAMINATION AND LICENSE.

C. H. Sawyer, Michigan, Chairman, read the report of this committee, stating that there should be a board of medical examiners separate from the state board of health. Several states

have tried the combined board of health and medical examination, but have, after experience, separated them, and those states in which the two boards are already combined are endeavoring to have the division made.

The examining board should be single.

The examining board should be non-sectarian. However, under existing circumstances it does not seem practicable or possible of accomplishment. In nineteen states the law provides for a mixed or sectarian board. Of seventeen states in which the law is silent as to sect, fourteen reported through the Secretary of the board, seven advocating a mixed board, three a non-sectarian board, and from four there was no expression.

The examining board should be appointed by the governor on nomination of the state society. Any other attempted method at this time would more than neutralize the good effect of the medical board on the profession and people at large.

The secretary should be a member of the board. When possible he should be a member of the board, but not necessarily so.

The examining board should be entirely distinct from all educational institutions. This applies to every state in the Union except New York, where the University of the State of New York is a corporate institution, executive in its character and non-teaching.

In connection with the report of Dr. Sawyer, W. Jarvis Barlow, California, presented some statistics from that state which gave a general idea of the fitness of such schools to educate students in medicine.

REPORT OF THE COMMITTEE ON QUALIFICATIONS OF APPLICANTS.

S. D. Van Meter, Denver, Chairman of the committee, presented this report:

It is unquestionably desirable that all applicants for license to practice medicine should be required to furnish proof of having received preliminary and collegiate education equal to that standard recommended by the Council on Medical Education. The members of the committee feel that all boards cannot afford to adopt these requirements for all applicants. Nothing can be said against its adoption for those making application for license on credentials, but to deny those wishing to make application by examination the right so to do raises a very serious question. The committee believes that only the fundamental branches should be included in the list of subjects for examination and that all questions on materia medica and therapeutics should be excluded. It is not advisable for the state to encourage sectarianism in medicine and it has no more right to recognize a school of medicine than one of theology. Examinations, in the opinion of the committee, should be oral, clinical, and written. They should be practical and designed to furnish the examining board with adequate information on which to determine the educational and moral qualifications of those examined. The committee believes that examining boards should have the authority to determine the good standing of colleges. They should arrive at their conclusions by an unbiased review of all obtainable data, but owing to the cost and physical impossibility of making personal inves-

tigations of colleges at a distance, boards must of necessity at present rely chiefly on the reports of the Council on Medical Education and the Carnegie Foundation for the Advancement of Teaching.

REPORT OF THE COMMITTEE ON THE DEFINITION OF THE PRACTICE OF MEDICINE.

L. M. Halsey, New Jersey, presented the following definition: A person practices medicine and surgery within the meaning of this act who holds himself or herself out as being able to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity, physical or abnormal mental conditions, and who shall either offer or undertake by any means or methods to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity, abnormal mental or physical conditions.

PROVISION FOR EDUCATIONAL STANDARDS IN A MODEL MEDICAL PRACTICE ACT.

N. P. Colwell, Secretary of the Council on Medical Education, Chicago: No practice act can be considered a model which does not provide for a single board of medical examiners, or a single authority for the enforcement of its requirements. Nor can it well be considered a model unless it provides that the members of this board are to be selected because of their special qualifications for the duties involved, rather than for political or other reasons. Unless these two points are safeguarded, any provision for educational standards will be of limited value. With our form of government, a single board of capable medical examiners is the best and only legal barrier which can be placed between a suffering humanity and the hoards of would-be practitioners being turned out annually from the 160 or more medical institutions in this country, many of which adhere to no definite standards, and have little or no facilities for the satisfactory training of medical practitioners. Taking it for granted that a single board of able medical examiners is provided for by the practice act, then the simplest wording of the clause providing for educational standards is the best. A model practice act should not attempt to define educational standards nor what should constitute a medical college in good standing because standards are rapidly changing, but should give the board the authority to fix standards.

The requirement of graduation from a reputable medical college, as shall be determined by the board, affords a double assurance that all applicants granted licenses are well qualified to practice medicine. First, a medical college which the board knows is reputable has certified to the applicant's fitness to practice medicine by having granted him its diploma; and, second, the state board has subjected the applicant to its examination, which must have been satisfactorily passed before the license is granted.

REPORT OF THE COMMITTEE ON RECIPROCITY AND REGISTRATION.

Charles H. Cook, Massachusetts, read the report of this committee:

All medical legislation is embraced under what is called the police power and has to do with the protection and benefit of the public. Legislation relating to reciprocity should have for its object

the public welfare, else such legislation cannot be justified. To justify a law establishing reciprocity between states it must be made clear that it would result in better protection to the inhabitants of the respective states.

For what purpose are the various state boards of registration established? To protect the inhabitants of the respective states from unqualified physicians.

Can the duty and the responsibility of thus protecting the inhabitants of any state be delegated to the examining boards of other states? There can be but one answer to this, and that is, that each state board is the only board to pass on the merits of applicants for registration in its state and such powers cannot constitutionally be delegated to anyone else.

The committee could not recommend any law providing for general reciprocity. The suggestion was made instead that each state board be given authority to pass on the merits of each physician applying from another state, and whenever his credentials, affidavits and general qualifications would warrant such action, that he be registered without full examination.

What provisions for the registration of licentiates should a model law contain, and should any provision be made for county registration? If so, before what officers? As the purpose of registration is the establishment of a legal record accessible to the people whom it is intended to protect, the records should be sufficiently convenient to permit of prompt reference. The entry of registration should not only be with the state board, but with and before the local registrar of legal records, whether it be county, town, or district, or other subdivision of the state existing. Also a record of registered names of the whole state should be accessible in each subdivision of records to permit of knowledge of the standing of any licentiate who may come from a neighboring or a distant county in the state.

REPORT OF THE COMMITTEE ON REVOCATION OF LICENSE AND PENALTIES.

In the absence of the Chairman of this committee, E. L. Stevens, Iowa, the report was presented by B. R. McClellan, Ohio:

1. Should the state licensing board have power to revoke a license? If so, on what ground? Yes, subject to an appeal by the defendant to the district court.

2. Should such revocation by the state board be subject to the review of the courts? If so, should this include only a review of the proceedings of the board, or should the review include the questions at issue and the evidence introduced? Yes, on appeal, in which case the courts should review the proceedings of the board and consider the merits and all the questions at issue in the case, with the thought of justice to all concerned and the further thought of protection of the public.

3. Should a model medical practice act impose a penalty for obtaining money from patients through false representation, as well as for practicing medicine without a license? Yes, the medical practice act should impose a penalty for obtaining money from patients through false representation. Such penalties, if possible, should

require restitution as well as fines and imprisonment. Such penalty should be severe, more severe than frauds in banking or insurance.

4. What should be the penalty for practicing medicine without a license? Should it be fine, imprisonment, or both? Both fine and imprisonment.

5. What should be the penalty for falsely representing one's self to be a legally qualified physician? If this question be interpreted as implying that the one thus falsely representing himself also attempts to practice under such misrepresentation, he should be subjected as suggested in the answer to question three.

6. Should revocation of license be temporary or permanent? Either permanent or temporary, pending on the evidence and public welfare.

7. Should unprofessional conduct or criminal abortion be considered a justifiable cause for revocation of a license? Yes.

8. What other causes should justify revocation of license? Perjury while on the stand as expert witness.

9. What penalty should be imposed on limited practitioners who exceed their functions? The same penalty as those for practicing without any kind of a license.

TUESDAY AFTERNOON SESSION.

SOME OF THE CONSTITUTIONAL ASPECTS OF MEDICAL LICENSURE.

Ernest Freund, Professor of Jurisprudence and Public Law, University of Chicago: The serious difficulty of the licensing system lies in the details of its working out and relates both to its scope and its requirements. The problem has generally been treated as one of legislative policy and statutory construction. Our courts have found it possible to construe the term "practice of medicine" in such a way as to exclude osteopathy, optometry, massage and Christian science treatment. In a great many cases the legislature has inserted liberal exceptions into the statute, especially so with regard to mental treatment. In other cases, and particularly with regard to osteopathy, it has prescribed special tests of qualifications. There is a double objection to a licensing law too sweeping in its terms, and not sufficiently regardful of simpler methods of treatment. One objection is that it will give color to the charge or suspicion of monopolistic exclusiveness; the other is that it will lead to exemption by judicial interpretation, or if the terms of the statute make that possible, to a breaking down of the law through non-enforcement, and the consequent toleration of a class of outlawed practitioners who might with advantage to the community be given a status of legal recognition. To discover the sound principles of medical practice legislation, a study of the history of legislation is as important as a study of judicial decisions. Under prevailing conditions in this country the preponderance of argument is in favor of the maintenance of the license system, and sound principle requires a careful definition of licensed practice, and its protection as a right of property. The whole matter of qualification, differentiation and exemption, on the other hand, is one in which there must be much of positive or conventional regulation, and in which conclusions must be reached

mainly on the basis of experience, expediency and the compromise between conflicting views.

UNIFORM STATE LAWS.

Prof. Roscoe Pound, University of Chicago, discussed the value of uniform state laws regulating the practice of medicine.

IMPORTANCE TO THE PUBLIC OF THE PROPER ENFORCEMENT OF MEDICAL LICENSE LAWS.

Hon. Harry Olson, Chief Justice Municipal Court, Chicago: The American Medical Association is rendering the public most important service by its efforts to secure a uniform and high standard of medical education and licensure in all the states. The intelligent and thoughtful layman is encouraged by the progress made by the association in this regard since 1904. The wonderful progress of medicine in the last thirty years has increased the need of a thorough education of those who contemplate its practice. The machinery to enforce the medical license laws should not be in the board of health. That body has its hands full with the questions of public sanitation, quarantine, and occasionally, it is said, politics. There should be a separate body composed in the majority of medical men, but it would do no harm to have a lawyer on it, which should control not only the licensing of physicians, but the requirements of the accepted medical colleges and the requirements of preliminary education for entrance on the study of medicine as well. This body should have power on complaint and after giving due notice to hear evidence as a court and to determine whether a license once granted should be revoked for conduct involving immorality in the practice of medicine, and such offences as dishonesty, conviction of crime, addiction to drug habits, etc. The power the supreme court of this state has to disbar a lawyer on a proper showing made to him by the state's attorney, the bar association, or an individual, after notice and after a hearing of his dishonesty, is a tremendous factor in purifying the legal profession and in keeping its dishonest members within bounds. The licensed lawyers who were convicted during the ten years that I acted as a prosecutor in the criminal courts of Cook County were promptly disbarred by the supreme court. The physicians who served in the penitentiary, promptly on their discharge resumed the practice of medicine, even though the crimes they committed involved falsification of vital statistics, and in one case, though the indictment was based on the charge of conspiracy to obtain money by false pretenses, the court and jury were of the belief that a murder had been committed. Without examining the law and decisions of the courts of this state, it would seem that the local medical profession had been derelict in the matter of its failure to present evidence to the state board of health against those members of their profession licensed in the state who ought to have forfeited their right to practice by unprofessional or dishonorable conduct.

The law of this state permitting the revocation of physicians' licenses for dishonorable conduct only applies to those physicians whose licenses were issued since 1899. As the law now stands, those licenses issued prior to 1899 may not be revoked. This defect in the law should

be amended at the next session of the legislature, so as to apply to all physicians who are permitted to practice their profession in this state, no matter when their licenses were procured. The statute should be amended to state plainly that a license might be revoked for malconduct as a physician, which malconduct should be specifically enumerated in the statute. Conviction of a felony should be added as one of the causes. The responsibility for the proper enforcement of medical license laws falls first on the medical profession itself. It must furnish the initiative. The machinery is at hand now for all licensed since 1899. An amendment to the law will reach all. The state's attorney and the courts are at the disposal of physicians and the people are with them.

THE ATTITUDE OF THE MEDICAL PROFESSION REGARDING MEDICAL PRACTICE LAWS.

Henry B. Favill, Chicago: The majority by far of the members of the medical profession have no concern or no conscious interest in medical practice acts. Elevation of the rank and file of physicians in point of fundamental education and practical efficiency clearly rests with the medical profession. Yet, as a practical feature, it is found to go only *pari passu* with public demands. The improvement in stands and requirements in medical schools in recent years have been particularly in those schools in which the nature of things would have improved under growing conceptions and higher ideals. All the leading colleges as a mere evolution of medical thought would have reached their present status without state requirement. To declare any candidate eligible who has a diploma from a recognized medical school; to recognize medical schools on the basis of fictitious presentation and fraudulent methods, and then to complete the test by an examination which any man with a good memory and no medical training can easily pass, is not only futile, but in the highest degree iniquitous. The more clearly the elements of qualification and competency can be set forth, the greater will be the influence among the minds of the public.

The early history of reform movements may be a necessity marked by arbitrary and restrictive measures. As a feature of permanent and well-constructed society, however, that custom which rests on widespread intelligence is the only custom which can be expected to endure. The merits of the suggestions which I make are three: (1) The highest degree of individual freedom; (2) the highest standard of classification as a guide to public judgment; (3) limitation of the stamp of approval or employment by the state to individuals whose qualifications have been actually determined. I believe that there is but one ground on which to justify the interest and agitation in the matter on the part of the profession; that ground is protection of public interests.

WEDNESDAY MORNING SESSION.

CHAIRMAN'S ADDRESS: WORK OF THE COMMITTEE ON MEDICAL LEGISLATION.

On the third day of the joint conference, Charles A. L. Reed, Cincinnati, Chairman of the Committee on National Legislation, presided.

SECRETARY'S REPORT.

Frederick R. Green, Chicago: The careful attention of members of the National Legislative Council should be given to the advisability of selecting, so far as possible, men for appointment on the National Auxiliary Legislative Committee who are interested in legislative matters and active in medical society and political work, and especially the selection of those who will give prompt attention to communications sent from the committee, the bureau, or the members of the National Legislative Council. It is also advisable to consider carefully each member's record or efficiency in making reappointments or filling vacancies in order that the best and most experienced men may be retained and those who show inefficiency or lack of interest may be eliminated.

The Secretary then discussed vital statistics, pure food and drugs, state medical practice acts, expert testimony, sectarian legislation, reorganization of the legislative work of the association, and closed by saying that the value of the bureau of the Council, the various state associations, and the American Medical Association itself, will be in direct proportion to the assistance and co-operation rendered by the representatives of the different states.

WEDNESDAY AFTERNOON SESSION.

REPORT OF REFERENCE COMMITTEE ON NATIONAL LEGISLATION.

G. B. Young, U. S. Public Health and Marine Hospital Service, presented the report of this committee endorsing the following bills now before Congress: S. 1017, H. R. 6184, Sixty-first Congress, first session: "A bill to reorganize and increase the efficiency of the hospital corps of the United States Navy and to regulate its pay." S. 1015, H. R. 4305, Sixty-first Congress, first session: "Authorizing the appointment of dental surgeons in the navy." S. 4745, H. R. 16892, Sixty-first Congress, second session: "To equalize the pay and allowance of assistant surgeons and acting assistant surgeons in the United States Navy." Bill submitted in draft and not numbered: "To increase the efficiency of the medical department of the United States Navy."

COMMITTEE ON FEDERAL AND STATE REGULATION OF PUBLIC HEALTH.

This committee reported that the bill now before Congress, asking for a department of health, will probably not be passed at the present time. The committee suggests that a bill be passed that will give recognition to the health interests of the country in the title of a department, and that within that department there be organized an efficient bureau of health to consist of all present public national health agencies.

On motion, the report was adopted.

REPORT OF COMMITTEE ON OPTOMETRY.

George W. Gay, Boston: The committee believes most emphatically with the medical profession that as a rule a medical training is indispensable for a proper treatment of the eye on account of the close relationship between the eye and other parts of the body, and between eye symptoms, like headache and poor sight,

and general constitutional conditions. Without medical training and with nothing but his crude, untrained observation, how will the optometrist be able to tell the presence of deep-seated intra-ocular disease? The optometrists have few, if any, proper schools, and those already in existence are not officially recognized by the optical societies. The great state of New York has but one school of optometry and that is located in Rochester, the city of New York having none. Furthermore, an overwhelming majority of the optometry or optical schools consist entirely of correspondence courses of a few weeks or months, giving a degree in which the title "doctor" is apt to figure prominently. The price of these courses varies from five to twenty-five dollars, and usually includes a handsomely engraved diploma. Optometry is a trade, not a profession. Like that of the optician, it is learned as are many trades, the watchmakers, for example—by working in a shop as an apprentice for a time, then perhaps as a journeyman until able to set up business for himself. No special preliminary education is required, and he earns his living while learning the business. This is a very different experience from that of learning a profession, as that of an oculist, for instance, which requires several years of preparatory study before entering the medical school term of four years, then the hospital course and the post-graduate courses, to say nothing of the considerable expense involved in this career of the practitioner.

Report adopted.

MEDICAL EXPERT TESTIMONY.

L. M. Halsey, New Jersey, presented the report of this committee.

As the result of a recent canvass made by the Committee on Medical Legislation of the American Medical Association it was found that of thirty-five states heard from only two, Michigan and Rhode Island, had statutes regulating the admission of medical expert testimony to the courts. In summarizing its work the committee offered the following suggestions:

1. Give the courts the common-law power to charge the jury on the expert evidence.

2. Also give them the authority to call experts of their own motion under certain conditions, said experts to be paid by the county in which the case falls.

3. Resort more frequently to medical commissions and to custom which obtains in ordinary consultations.

4. Let the courts allow to serve as experts only those who are properly qualified and let them be treated as gentlemen in court, abolishing the custom, too prevalent in some places, of badgering and insult during cross-examination.

Could these suggestions be adopted, there would be little cause for complaint as to the character of medical expert evidence in our courts. Expert medical testimony would occupy a higher standard of excellence than it has ever

done before, one commensurate with its importance and its universal demand.

REPORT OF THE CARROLL FUND COMMITTEE.

Major M. W. Ireland, U. S. Army, Chairman of the Carroll Fund Committee, gave a detailed statement of the work of this committee, giving the names of all subscribers and the amounts subscribed. The committees urged that action be taken to secure the property of Mrs. Carroll from future indebtedness, and on motion the committee was given power to act in this regard.

REPORT OF COMMITTEE ON CONCLUSIONS AND PLANS OF ACTION.

Secretary Green presented the following report of this committee:

1. *Resolved*, That it be the sense of this Conference that opticians be licensed as such by the state medical boards, and that Dr. Gay's pamphlet be endorsed and ordered distributed.

On motion, this resolution was adopted.

2. *Resolved*, That the Conference recommends the passage of bills S 1017, H. R. 6184, Sixty-first Congress, first session; S. 105, H. R. 4305, Sixty-first Congress, first session; S. 4745, H. R. 16892, Sixty-first Congress, second session; also the bill to increase the medical department of the United States Navy.

On motion, the resolution was adopted.

3. *Resolved*, That the Conference recommends the passage of the bill for the relief of the estate of late Assistant Surgeon W. H. Miller, U. S. P. H. and M.-H. S., and recommends the passage of legislation in the interests of the personnel of the U. S. P. H. and M.-H. S.

On motion, this resolution was adopted.

4. *Resolved*, That the Conference recommends that state food laws be so amended as to provide that advertisements of food and drug products correspond with the labels; and that the drug section of the model pure food law conform as closely as possible to the national food and drugs act.

On motion, the resolution was adopted.

5. *Resolved*, That the Conference heartily endorses the position taken by the President in his message to Congress in regard to national health legislation, and urges on Congress the passage of legislation looking toward such ends.

On motion, the resolution was adopted.

6. *Resolved*, That the Conference endorses the control by state medical examining boards, the standards of medical education, and also endorses the standards of education, both preliminary and collegiate, recommended by the Council on Medical Education, but it is the sense of the Conference that adherence to these standards should not be allowed to result in the destruction of a single sectarian board.

On motion, the resolution was adopted.

On motion of Dr. Halsey, the report was then adopted as a whole.

The conference then adjourned sine die.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.

DISINFECTION WITH ACETONE-ALCOHOL.

Herff finds that the penetrating power of alcohol is increased by adding acetone. In his work he also adds iodine to increase the efficiency of the sterilization. His practice is as follows: "The patients are not prepared as formerly by means of soap or sublimate poultices. No soap or water is used, but the site of the operation is carefully washed for five minutes with acetone-alcohol and a soft flannel pad. When dry, the following solution is painted on the skin: Benzoin and damar, each 10 gm.; thymol, 0.5 gm.; ether, ad 100 gm. This solution may be colored with sudan, or its efficiency may be increased by the addition of 20 per cent of an alcoholic iodine solution (iodine, 7 gm.; potassium iodide, 5 gm.; alcohol, ad 100 gm.). After the operation the suture line is protected with the same resinous solution. In the vagina a 3:1000 solution of iodine in 50-per-cent alcohol is employed as disinfectant. In obstetrical work, the vulva is cleaned with soap and water and a sublimate solution, while in the vagina, tincture of green soap or acetone-alcohol is used.

"For sterilizing the hands, acetone-alcohol is also excellent, but the percentage of acetone should not exceed 1:10, for fear of irritation. The nails should be cleansed with soap and water, but without a brush. One great advantage of this method is that it can be used under all conditions."—Therap. d. Gegenwart, December, 1909, via. Merck's Arch.

IODINE AN EFFICIENT AGENT FOR STERILIZING THE SKIN.

Stone (Am. Med. Jour., Jan. 1910, p. 33), refers to the work of Gressich and that of Walther which show that iodine sterilizes the skin without the need of the washing with soap and water as is usually done. In fact scrubbing the field immediately before operation increases the risk of infection over that when the iodine alone is used. The patient is prepared for operation the day before by a bath and shaving of the operative site. At the time of operation the field is wiped with ether and the iodine applied. The excess is then removed by further use of ether. Walther's bacteriologic and histologic tests show that "every open space or lymph channel or capillary follicle was reached by the tincture. He announces his results after an ether wash as better than without any previous application, because the ether dissolves fat and foreign substances not affected by water. The mucous

surfaces of the body are sterilized in less than one minute after the application is made, but the skin may not be completely so until eight minutes have passed."

Nearly all of Dr. Stone's work was done "after the application of a weak tincture made by adding one part of the officinal tincture to three parts of alcohol. The results of this method of skin sterilization are ideal, so far as the emergency cases are concerned, as nearly every surgeon testifies who has tried it. The experience with the method in general surgery has also been universally satisfactory when the tincture has been used in full strength. As many surgeons are experimenting with weaker solutions, we will of course hear of some cases of infection after its application. The tincture of iodine is a 7 per cent solution, while the formula of the Claudius solution is only 1 per cent, which would indicate that a 2 per cent solution would prove effective when applied to the skin."

The advantages of this method aside from efficient sterilization are: saving of time, the patient being ready for operation as soon as anesthetized; the patient is kept dry and warm; and if the field of operation has to be enlarged it can be done quickly without endangering the field already opened.

IODINE CATGUT.

Edge (Brit. Med. Jour., Feb., 1910) prepares soluble iodine catgut thus: "Catgut, defatted by lying in ether for twenty-four hours, is boiled in absolute alcohol for one hour. It is then laid in a solution made of 1 part of liquor iodi fortis (linimentum iodi) and 11 parts of water for one week. It is preserved in and used from a solution made of 1 part of liquor iodi fortis and 50 parts of rectified spirit."—Via. Med. Record.

HEXAMETHYLENAMIN ELIMINATION BY THE MUCOUS MEMBRANE OF THE MIDDLE EAR.

Barton (Jour. A. M. A., Mar. 12, 1910, p. 871), following the discovery by Crowe that the cerebro-spinal fluid contains hexamethylenamin found that it is also eliminated through the lining membrane of the middle ear. This he determined by tests on a patient having pneumococcus infection of the middle ear. Of its medicinal value in this case he says:

"It would appear therefore that hexamethylenamin is eliminated in the secretion of the middle ear, and that possibly it may be found to be of value in the treatment of otitis media.

Certainly the case above reported of pneumococcus infection appeared to be rapidly cured by it. Whether other forms of purulent middle ear disease will be equally amenable to such treatment will remain for future investigations to decide."

A RATIONAL PUERPERIUM.

De Normandie (Bost. Med. & Surg. Feb. 3, 1910, p. 145) gives the following review of the practice urged by Haultain (Brit. Med. Aug. 7, '09.): "Haultain urges his patients to sit up in bed to meals on the second day after labor, and as early as she feels inclined after that she is allowed to get up and walk a few steps, and to remain up an hour. This is repeated the day after morning and afternoon, and from then on patients may gradually get around. His argument is that if labor is not a disease, then the puerperium cannot be a convalescence. He reports 100 cases, all of whom sat up in bed on the second day; 40 were out of bed on the fifth day. Forty-seven were primiparae and 53 were multiparae. All were examined and the pelvic organs all found normal except in two, who had retroversion. Many were examined six weeks later and the involution was thorough and the organs in good position. This is one of several articles that have recently appeared, urging the getting up of patients in much shorter periods than is generally attempted. There is much that can be said against such a procedure, and the report of only 100 cases is not enough to draw any real conclusions, but it surely is most suggestive."

A SIMPLE AND CLEAN INSTRUMENT FOR VACCINATION.

Williams (Bost. Med. Surg. Jour., Feb. 17, 1910, p. 210,) describes an instrument which the laboratory man will recognize as a modification of the platinum loop so much in use for making transfers of cultures, etc., etc.: "The instrument consists of a piece of stiff platinum wire, 1 mm. in diameter and 5 cm. long, fused into a piece of glass tubing which serves as a handle. The other end of the wire, flattened by means of a hammer to a width of rather more than 2 mm., has been well rounded with a file and its edge roughened by making shallow cuts in it with a knife blade. This roughening is important, for if not done the instrument bores into the skin and causes unnecessary pain while the outer layer is being removed. With the roughening, and if skillfully used, there is little or no pain.

"To use the instrument, the platinum wire is first sterilized by heating to a red heat in a flame; it cools in a moment, and the end is then pressed

gently against the tense skin, which has also been sterilized, and the handle rotated between the thumb and finger of the right hand until the serum appears."

DIAGNOSIS OF INTUSSUSCEPTION.

Kimpton (Bost. Med. & Surg., Feb. 3, '10, p. 131) gives a very clear outline of the symptoms and urges that operation is the only treatment worthy of consideration. He says:

"Intussusception is essentially a disease of childhood and is only spoken of here as such. The diagnosis of intussusception is in the mother's story, practically, every time. In hardly any other disease is this so often true. Usually, the mother will say that the baby was perfectly well, when suddenly he began screaming, turned pale and vomited, but got better very quickly. After that the baby was fussy, cried and apparently had pain at intervals, with straining. Soon after the first sharp pain the bowels may have moved. Usually intestinal peristalsis has been marked in these children, with considerable gas. After a few hours, usually within the first twelve, the mother notices that there is blood in the stools, and, almost invariably, it is now that she sends for the doctor, and it is now that he should make the diagnosis, on his first visit. Here is where the child's life is saved—at the time of the doctor's first visit—and it is the attending physician who really saves these babies. It is a great mistake to half listen to the mother and then not at all consider her story. Too often is the mother's story disregarded in these cases. At the beginning these cases look as though nothing was wrong with the baby. It may have a normal temperature and pulse. Later the temperature is usually sub-normal, with increased pulse-rate. This fact is what misleads, but it is in these first hours that the diagnosis should be made. It is easy enough after twenty-four to thirty-six hours have passed.

"With the history alone of a previously well child suddenly beginning to scream, turning pale, vomiting; then a quick recovery, cramps, straining and crying at intervals, and in a few hours passing some blood, the child still probably looking pretty well, one may be practically certain of an intussusception. * * * If operated early, the mortality will not be nearly so bad as at present. At present the hospitals are receiving more cases of intussusception, because they are now recognized more often; also, because the treatment is more often recognized to be surgical, but still they do not arrive as early as they should. They usually arrive after castor oil and enemata have failed to move the bowels, with a note saying that all efforts to move the bowels

have failed and that an intussusception is suspected. This, after three, four or five days have passed. An early diagnosis and at once calling a surgeon or sending to a hospital, without even stopping to give castor oil, should be the aim of all."

STAPHYLOCOCCIC INFECTION OF THE BLADDER CURED BY AUTOGENOUS VACCINES.

MacGowan (Calif. State Jour. Med., Mar. 18, '10, p. 179) in an article on vaccines in the treatment of urinary disease, cites two cases where vaccines proved their value in infection following removal of the prostate. The most interesting of the two cases was that of a patient who had led a catheter life for two years, whose urine contained "pus, blood, much albumin, but no casts, and who was septic at the time of operation." The operation was done under spinal anesthesia.

"On the 14th of November he developed a cough which grew worse, but without any signs of pneumonia. On the 18th he developed a peculiar languor, nausea, restlessness, stupidity entirely unlike uræmia, which increased as the days went by, the temperature, pulse and respiration all increasing, the latter bearing no fixed relation to the former. For all this we could discover no cause. His urine, which came away through drainage tubes, was normal in quantity, and the quality good, and there was no cessation of the liver functions. On the 22d of November he commenced to have involuntary movements of the bowels and the septic condition became alarming."

The patient was thought to be having an attack of grippe, no other cause being evident. On the 22d the washing from the bladder showed a lot of golden yellow granules which looked like giant colonies of staphylococcus aureus. An almost pure culture was prepared from these.

"At 2:45 on the 23d of November we gave him an injection of 80,000,000 of the staphylococcus aureus vaccine. This was followed in a few hours by a drop in the temperature from 102.6 to 99.6 and an improvement in the lethargy and stupidity.

"On the 24th of November at 10 p. m., the temperature having risen to 100.6, and the lethargy increasing again, he was given an injection of 60,000,000 of the staphylococcus vaccine. At midnight the temperature had dropped to 98.6 and he had sunk into a peaceful sleep which lasted until 8 a. m., when his temperature and pulse were normal, his respiration had fallen to 22, and he was alert, intelligent and asking for

food. Within two days no further yellow granules could be found in the bladder washings, and though he had a long convalescence, due to a variety of depressing influences, he never from that day to this has had any return of the septic poisoning, which was so clearly due to the Staphylococcus aureus, and which so promptly yielded to the vaccine."

ETHER: AN ANTIDOTE FOR COCAINE AND STOVAIN POISONING.

Engstad (J. A. M. A., Mar. 12, 1910, p. 964) reports his success in using ether to counteract the effects of cocain poisoning. He says: "It stimulates the heart and the respiratory system almost instantly. The pulse becomes fuller at once and of normal tension. The marked mental excitement is allayed as the patient goes under the influence of ether, and the effect of the poison rapidly disappears. The individual regains consciousness as soon as the effect of the small amount of ether has disappeared.

"To get the best results, the anesthetic is administered only to the degree of mild surgical narcosis, or, at times, even less than this. A mask should be employed and the ether given by the drop method. This is all-important. Given by the old method, the ether would only add to the danger of asphyxia by excluding air from the venous blood engorged lungs."

BOOK REVIEWS

THE GOUTY STATE—ITS MODERN PATHOLOGY AND TREATMENT ACCORDING TO ROBIN, DIEULAFOY, FAUVEL, LE GENDER, DYCE, DUCKWORTH, ETC., ETC. W. . Morrison, 43 Broad St., New York, Publisher. 25 cents.

A collection from current literature of the views of a number of authorities on the above subject. Such a collection necessarily brings out many differences of opinion, but is valuable as showing the views of men who have carefully studied the question, and the reader may draw his own conclusions.

UNCOOKED FOODS AND HOW TO USE THEM. A TREATISE ON HOW TO GET THE HIGHEST FORM OF ANIMAL ENERGY FROM FOOD. By Mr. and Mrs. Eugene Christian. Seventh Edition, Revised and Enlarged. Health Culture Co., New York, Passaic, N. J. L. N. Fowler Co., London, England.

When a person has read all the pet theories on diet he is worse off than before, because he does not know what to eat or when to eat.

This little book is cleverly written, and is a good companion fad for Mr. Horace Fletcher.

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKee, Collaborator.

The Brown County Medical Society met at Georgetown, Ohio, on Wednesday, February 23. Annual election of officers. "The Financial Side of the Practice of Medicine," Wesley Love; "Nasal Catarrh and Its Treatment," J. N. Ellison; "Hemorrhoids," W. L. Faul; discussion.

At the meeting of the Cincinnati Academy March 28, F. H. McMechan, anesthetist to St. Mary's and Cincinnati Hospitals and the Cincinnati Polyclinic, presented a new drop ether mask with an oxygen attachment, which is being used for routine narcoses at the Cincinnati Hospital. The mask is a combination of the Yankauer face piece with the Ferguson double chamber superstructure, and a perforated oxygen rim.

Alice McGraw's report of 15,000 personal etherizations by the drop method has popularized this technic of anesthesia, and the concomitant use of oxygen, as provided for in the new mask, adds the perfecting detail to the narcosis.

Gwathmey of New York conclusively proved by animal experiments and clinical observations that the concomitant use of oxygen made chloroform as safe as the ordinary technic of ether and air, and made etherization next in safety to nitrous oxide and oxygen. These conclusions of Gwathmey have been borne out in the results obtained on Dr. McMechan's anesthetic service, both in private cases and the routine hospital work.

The principal advantages of the new mask are:

1. Its ease of sterilization, as it can be boiled; its ease of preparation, eight thicknesses of gauze held over the net dome of the vaporizing chamber by a spring loop and a flannel cover adapted to the wire framework by a single drawstring.

2. Its use in any posture, being provided with three dropping holes, and allowing etherization in the pron position (for cerebellar operations) by sending the oxygen through the ether bottle, and into the perforated rim of the vaporizing chamber.

3. The speedy, pleasant and safe induction of the drop method, preceded by ethyl chloride or ethyl bromide, or reinforced by a few drops of chloroform for the stage of excitement in alcoholics.

4. The absence of mucous secretion due to the influence of the oxygen.

5. The absence of stertor and billowy breathing, and an increased suppression of pain reflexes and muscular rigidity without abolishing the lid-reflex, a condition difficult of attaining with other technics without the use of oxygen.

6. The independent use of oxygen and ether, so that the supply of ether may be increased or diminished irrespective of the other.

7. A physiological balance in the gaseous composition of the blood, due to the facilities of oxygenating the circulation and thus expediting the excretion of carbon dioxide, which is a valuable preventive of shock.

8. The absence of respiratory complications due to the abeyance of mucous secretion and a diminution in circulatory depression due to the raising of blood pressure by the influence of the oxygen, and the entire absence of venosity or cyanosis.

9. The abolition of post-anesthetic vomiting in almost every case, irrespective of the nature of the operation, and a much quicker return to consciousness and the ability to take nourishment.

10. A diminution of post-anesthetic lung and circulatory complications.

The oxygen supply for the mask is obtained in hospital narcoses from the large tanks of compressed oxygen; in private practice from the ozone generator, a small, portable apparatus, which supplies oxygen by means of a chemical cartridge in contact with water.

The percentage of oxygen is regulated by the use of such a flow of gas as obviates all tendency to mucous secretion or cyanosis. Any tendency on the part of the patient to come out calls for a reduction of the oxygen stream.

This technic adds a decided safeguard to etherization and entirely robs it of its unpleasant operative inconveniences and post-anesthetic effects.

"Sexual Impotence in the Male" was presented by A. W. Nelson, M., D., before the Cincinnati Academy of Medicine, on March 7-10.

Our attention is called to the fact that potency of an individual ordinarily depends upon the use or abuse of the sexual organs. The extreme use of the sexual organs in the early years will no doubt bring on impotence at an earlier age

than if the sexual organs had been exercised temperately. As an instance, the Orientals are cited, as they become impotent at a much earlier age than the Occidentals, on account the former begin to exercise their sexual organs at an early age. Likewise, heredity, to which Morrow called attention, was given due consideration as to its influence on sexual vigor. As to the age of potency, histories of two extremes are mentioned. The youngest being 4 years of age, while the oldest 118. The circumstances surrounding these cases are very interesting and would no doubt form amusing reading matter were we able to print in detail.

While the paper practically considers every interesting feature of impotence, treatment, the most important consideration to the practitioner, is presented in a clear and concise manner. Attention is called to the fact that we must exercise caution in accepting remedies as universal cures for impotence. We must discard the idea that a certain remedy will cure every case of impotence. Quite a few of our therapeutic failures are the result of misplaced confidence in certain drugs recommended by manufacturing chemists for the cure of impotence. Likewise, great care must be exercised in the use of aphrodisiacs. The indiscriminate use of aphrodisiacs, no doubt, causes more harm than good, as it is known that frequently sedatives instead of stimulants are prescribed with beneficial results. Apparently, Nelson does not seem to place very much confidence in organo-therapy in the cure of the disease under consideration. He states that the preparations on the market are chiefly recommended in the treatment of neurasthenia and neurosis in general, than for impotence in particular, adding at the same time that it might be of benefit in neurasthenic type of impotence. For a comprehensive idea of the various types of the disease, the following classification is utilized: Organic or physical; physis, including relative impotence; irritable; paralytic; reflex or collective, and neurasthenic.

In dealing with a given case of impotence, after carefully examining the patient, it is suggested to first decide in which of the above classifications the case belongs, and then institute treatment accordingly. In examining a case for sexual weakness, our efforts must not be limited to the genital organs only. The examination should include a thorough physical examination of the body—urinalysis, chemical and microscopical. Familiarity with the use of electricity, urethroscope, etc., are essential in order to be exact in our diagnosis.

SECOND DISTRICT

R. H. GRUBE, M. D., Collaborator.

A meeting of the Clark County Medical Society was held March 7. Postgraduate course, "Anatomy of Liver and Gall Tract," Frank Prince; "Physiology of Liver and Gall Bladder," R. B. House.

A meeting of the Clark County Medical Society was held March 21; postgraduate course. Discussion of "Diseases of the Gall-bladder and Ducts," by A. B. Smith.

Clark County Medical Society held a meeting on March 14. Postgraduate course on surgery of the liver: "Injuries of the Liver, Abscess of the Liver, Cirrhosis (atrophic) of the Liver," L. L. Lyman.

Regular meeting of the Montgomery County Medical Society was held Friday evening, March 18. Program was as follows: "Puerperal Eclampsia," P. L. Gunkel; "Placenta Prævia and Post Partum Hemorrhage," C. H. Breidenbach; "Labor and Its Complications," S. A. Duckwall.

FOURTH DISTRICT

TODD DUNCAN, M. D., Collaborator.

A meeting of the Section on Pathology of the Academy of Medicine of Toledo and Lucas County was held on Friday evening, March 11. Program: "Bilateral Dermoid Cysts of the Ovaries," F. M. Freeman; "Ludwigs Angina," C. F. Tenney; "Tuberculous Testicles," C. W. Moots.

UNPROFESSIONAL CONDUCT.

The State Medical Board has revoked the certificate of E. J. Rose, of Toledo. Rose was formerly located in Cleveland and went under several names. He was known as Dr. Rose, Dr. Justin and Dr. Belmont. He maintained two different offices under different names in Cleveland. The newspapers made it so warm for him that he left that city and went to Toledo. The Board understands that he has taken his family and gone to Paris. He resisted the attempt of the board to revoke his certificate and secured an injunction in the courts.

A meeting of the Section on Surgery of the Academy of Medicine of Toledo and Lucas County was held on Friday evening, March 25, 1910. The program: "Mixed Anesthesia," Howard L. Green; discussion opened by C. G. Souder. "A Study of Blood Pressure in Anesthesia," E. I. McKesson; discussion opened C. E. Price.

The regular monthly meeting of the Ottawa County Medical Society was held in Oak Harbor, March 9. The meeting was of a preliminary nature, working out a program for the coming year. The meeting was well attended and an instructive line of work selected. The time of meeting was changed from the first to the second Wednesday of each month.

The Academy of Medicine of Paulding County met March 16. The program was as follows: "Tuberculosis," R. J. Dillery; "Early Diagnosis and Treatment of Tuberculosis," L. R. Fast. The papers were very interesting and free discussion followed.

The Putnam County Medical Society met in Ottawa, O., on February 3, at 1:30 p. m., with the following program: Clinical cases; "Pathology of Lobar Pneumonia," Dr. Hilty; "Diagnosis of Lobar Pneumonia," Dr. Wilcox; "Pneumonia in Children," Dr. Reed; "Treatment," Dr. Douglass. Discussion, C. E. Beardsley.

The general meeting of the Academy of Medicine of Toledo and Lucas County met March 4. Louis Miller read a paper entitled "Extracts from Medical History."

The Section on Pathology of the Academy of Medicine of Toledo and Lucas County met on March 11, with the following program: "Bilateral Dermoid Cysts of the Ovaries," F. M. Freeman; "Ludwig's Angina," C. F. Tenney; "Tuberculosis Testicles," C. N. Moots.

The Section on Medicine met March 18 for a symposium on measles and scarlet fever, as follows: "General Complications of Measles and Scarlet Fever," George L. Chapman; "Disorders of Nose and Throat in Measles and Scarlet Fever," A. L. Steinfeld; "Renal Complications in Measles and Scarlet Fever," R. S. Walker; "Eye Complications in Measles and Scarlet Fever," Charles Lukens. Discussion opened by J. M. Frick and W. W. Brand.

The Section on Surgery met on March 23, with the following program: "A study of Blood Pressure in Anesthesia," by E. I. McKesson; "Mixed Anesthesia," Howard L. Green whose paper was as follows:

OBSERVATIONS UPON THE ROUTINE USE BY THE
OPEN METHOD OF A MIXTURE OF
CHLOROFORM AND ETHER.

The mixture is usually made of ether two parts by volume, chloroform one part. Squibbs' chloroform and ether are always used, and they

are mixed fresh for each patient. The mixing of the agent is important because the chemical action produces a warm agent. It is a well-known fact that fewer deaths from chloroform occur in warm climates, which is no doubt due to the fact that chloroform is not administered in a condensed vapor.

The mask is essentially an Esmarch's mask, which consists of a wire frame with a guttered rim. Eight to ten layers of gauze are stretched over the frame. The frame is held in the left hand and never allowed to come in contact with the face.

The head is turned to the left and the jaw held with a pressure forward and upward. The third finger is on the facial artery.

We believe that the holding of the jaw is of the greatest importance in the successful administration of an anesthetic. Our rule is to try and keep the patient as near to normal as possible throughout the anesthesia.

The index finger and thumb hold the mask the proper distance from the face, which is about one-fourth of an inch. The mixture is given by the drop method, beginning with a single drop and gradually increasing the amount until the mask is saturated. This method has been employed for over ten years in all kinds of cases and all classes of patients, young and old.

The time required to induce surgical anesthesia is usually from four to fifteen minutes, and the majority of patients are under enough to begin the operation on an average of eight minutes. The patient usually goes under without any preliminary excitement, the pulse remaining as it was a day or two before the day of the operation, depending upon the disease for which the patient was operated; in fact, if there is any change in the pulse it is apparently for the better.

The amount of the mixture required to get the patient under varies from two drachms to two ounces. As a rule, four or five ounces are used for an hour's anesthesia and the second hour it is less in quantity.

The condition of the patient throughout the operation remains as near to normal as before the anesthetic was started. I have never had a pneumonia or a severe nephritis following the anesthetic. Vomiting is not as frequent or severe as that after ether, and we have never had a death on the table from the mixture.

We consider it certain that heart disease and weakness are the contraindication for chloroform; so are diseases of the respiratory organs and narrowing of respiratory passages contraindications for ether. When using ether, therefore, our chief care should be to reduce this tendency

to cause damage to the respiratory passages to a minimum, and we do this by lessening the quantity of both chloroform and ether to a minimum.

When ether, on account of its weakness, is compared with chloroform and of the large dose required is administered by asphyxiation method, which is effected by pouring a large quantity of ether into mask and excluding the air hyperemia of the lungs, and marked salivary secretion always results. These evils may be prevented by diluting the ether with chloroform and giving more air with the anesthetic. In cases where the properly diluted mixture is not strong enough we endeavor to avoid the evils of more concentrated vapor by inducing anesthesia with a small dose of morphine, and if there is any obstruction of the air passages as in goitre, enlarged tonsils, adenoids, or bronchitis, we give a small dose of atropine.

With ether also there frequently occurs a period of marked excitement accompanied by difficulty in breathing and cyanosis. The patient may scream, struggle, and have clonic and tonic contractions of the muscles.

With the aid of morphine given in one-sixth grain dose twenty minutes before the anesthetic, we have seldom had these symptoms, and for all cases where there is no contraindication to a general anesthetic it is far superior to spinal anesthesia.

We do not pin our faith to any one reflex or condition, but watch everything. We believe that the anesthetist should be an expert and skilled. That he should know every step of the operation because in certain conditions more of the anesthetic is required, as in pelvic inflammations and torsion or enlarged tumors, but as soon as the adhesions to the abdominal wall are released it requires very little of the mixture to keep the patient in the proper state of anesthesia.

We believe that digitalis, strophanthus, aquae ammonia, amyl nitrite, nitroglycerin, or whisky are of no value as heart stimulants in collapse during or following anesthesia. It is not necessary to remove sets of artificial teeth; the patient will breathe better with them in.

The anesthetist should not be kept from a view of the field of operation. If he cannot be trusted to keep his mind on the anesthetic and watch the operation, he is not a safe anesthetist.

I lay no claim to originality in the subject-matter; most of the observations have been made before. I simply bring this mixture before the profession as one of the safest anesthetics, and in our hands, with the methods described of administering it, it has proved the safest anes-

thetic that we have used. I have made no effort to cover all the points of anesthesia, but only mention those that we consider most important in inducing anesthesia by the mixed method.

FIFTH DISTRICT

H. G. SLOAN, M. D., Collaborator.

The Medico-Pharmaceutical Section of the Academy of Medicine of Cleveland met February 25, at the Cleveland Medical Library. The program was as follows: "The Pharmacopoeia and Its Revision," Prof. Joseph P. Remington, Ph. M., F. C. S.; "Chairman of the Committee on Revision of the Pharmacopoeia," Dean, Philadelphia College of Pharmacy. Discussion opened by T. Sollmann.

The Ashtabula County Medical Society met Tuesday evening, March 1, in the Business College, corner Main and Spring streets. A paper was read by J. F. Elder, Jefferson, Ohio, on "The Test Diet—Its Aid in Diagnosis and Treatment."

The regular meeting of the Lorain County Medical Society was held at Elyria City Hall, March 8, 1910. The program: Paper, E. V. Hug, Lorain; "Fractures of the Skull," Clyde E. Ford, Councilor of the Fifth District.

The Huron County Medical Society met Thursday, March 10, at 10 a. m., at the Chamber of Commerce, Norwalk. A. I. Ludlow talked on the subject of "Medical Progress in the Orient." C. E. Ford, Councilor for this District, was present and talked on "The County Society."

The sixty-eighth regular monthly meeting of the Lake County Medical Society was held at Painesville, Ohio, Monday evening, March 7, 1910. The program was as follows: Minutes of last meeting; miscellaneous business; presentation of cases; paper by John Phillips of Cleveland, on "The Differential Diagnosis and Complications of Influenza." Discussion and adjournment.

SIXTH DISTRICT

A. J. MARCH, M. D., Collaborator.

The regular meeting of the Summit County Medical Society for the current month was held in the Medical Club rooms at the Y. M. C. A. building in Akron on the evening of March 1, at which the following program was rendered and business transacted: "The Present Status of Serum Therapy," by Chas. E. Norris; "Ehr-

lich's Side-Chain Theory," by Chas. E. Held. Both papers were very well presented and conveyed to those present in a very interesting and convincing manner the fact that the trend of medical investigation and therapeutics for the next generation will be along the line of these great principles.

The monthly report of the Milk Commission by the chairman, B. W. Sippy, showed that the certified milk furnished by Mr. Barker's dairy, over which the society through this Commission, has some supervision, in an advisory way, is maintaining its high standard of excellence by showing a bacterial count during February of 6000 bacteria per cmm.

The people of Akron and vicinity have had access to certified milk now for about two years. Its introduction and very existant is dependant upon the support and publicity the physicians of Akron gave it and the physicians feel that the fight of any dairymen in furnishing milk of the quality of that coming from Mr. Barker's dairy is their fight and are anxious to enlist the influence of all physicians and public spirited people in the county in their aid.

Through the influence of the Summit County Medical Society and kindred organizations Akron has increased the efficiency of its board of health by getting more physician representatives appointed to membership of the board and as an immediate result had Veterinarian John F. Planz appointed sanitary inspector of food and milk. As yet no codes have been enacted by the city enabling him to perform his duties as he hopes to in the future, but he has already discovered some startling violations of sanitary laws. In two instances in the past week he has witnessed the slaughter of cows, that had until the time of slaughter been furnishing milk to Akron dairies, that were badly infected by tuberculosis. These cows being no longer productive or profitable for dairy purposes, were being slaughtered for beef to supply the local markets when discovered by Dr. Planz and were promptly condemned by him.

Would a community with a knowledge of these conditions object to the small salary he is receiving for the great protection he is rendering the public health?

Dell S. Bowman, of Akron, after receiving the recommendations of the Summit County Club, the Summit County Ministerial Association, the Federation of Men's Clubs of Akron, the Young Men's Christian Association, and the Women's Council, was appointed by the county commissions of Summit county as a member of the board of trustees of the County Children's Home.

A portion of a paper on "Mechanical Treat-

ment of Hernia," by Harry S. Davidson, Akron, Ohio, read by Dr. Davidson at the regular meeting of the Summit County Medical Society, in Akron, February 1, 1910:

SYMPTOMS OF INGUINAL HERNIA.

The subjective symptoms of hernia are very vague, and only by association with the objective symptoms can a diagnosis be made.

We may, and usually do, have indigestion, constipation, a dragging sensation in the lower abdominal region, a burning sensation in the region of the hernia and colicky pains generally referred to the umbilical region. This pain, of course, is much more intense where strangulation has taken place.

The objective symptoms are the presence of a tumor in the inguinal region or in the scrotum, which may be of various shape and size, depending upon the type of hernia with which we have to deal.

If it is of the oblique or indirect type it will be of oblong shape, lying in the inguinal region, provided it has not descended into the scrotum; if the latter has occurred we will find the mass extending into that region and if it is of the acquired type the outline of the testicle will be seen at the bottom of the scrotum beneath the hernia. If, however, the hernia is of the congenital type we will have difficulty in locating the testicle. This is a diagnostic point which is very useful in determining the type of inguinal hernia which is present, as in the acquired type a sack is present independent of the tunica vaginalis, which in the congenital hernia is absent, and the mass and generally is not visible at the lower testicle thus may be in any part of the scrotal border of the tumor.

In dealing with infants or young children only the objective symptoms are possible to elicit, but the diagnosis is usually very easy in this class of cases.

I shall not mention symptoms of the different varieties of hernia, such as umbilical, femoral and ventral, as the differential diagnosis which will follow will necessarily cover that field fully. Furthermore, I believe that the study and knowledge of inguinal hernia is of far more practical benefit to us as general practitioners because of its relative frequency as compared with the other forms.

Under the subject of mechanical treatment of hernia, I wish to state that it is my belief that no subject in the practice of medicine has been more neglected by the colleges and medical writers than this. I never received a word of instruction on the subject when in medical college and find that my experience has been that of

most physicians and it is a fact that very few medical publishing houses can furnish us with a work which deals exclusively and in a practical manner with this subject. These facts, I believe, are largely responsible for the present state of affairs in this country where the druggist and the quack advertiser have a monopoly on the truss-fitting business. This work should be in the hands of the physicians, who are acquainted with the anatomy of the parts, and are better qualified to say when a hernia is being properly treated. However, I repeat that we are to blame for the existence of these charlatans, because we do not do the work ourselves, and some even refer their hernia cases to them for treatment.

I believe that the truss fitter is a violator of the state medical laws, which prohibits any but registered physicians to use any appliance, application, etc., for the treatment or cure of any disease or infirmity; but to stop this practice, we must qualify and do the work ourselves.

1 While mechanical or palliative treatment of hernia is not supposed to produce cures, it does so in a great many cases if properly applied, and especially in cases of infants and young children.

Many devices and appliances are proposed to properly retain the hernia in infants, but from my personal experience I think a simple appliance, home made as follows, fills the bill and is inexpensive and simple in construction:

Take a two-inch roller bandage of firm texture, to which is tacked by a few stitches one or two pads (as required for single or double hernia), made by enclosing a small mass of cotton in a piece of muslin and molding the pad into an oval shape, which is easily done when it is being constructed.

The pads should be placed the proper distance apart so as to rest directly over the internal rings. First apply the pads to the proper place then encircle the pelvis in a direct line with the hernia by one or two layers of the bandage, after you have placed a safety pin or piece of adhesive plaster to hold your bandage snugly you have completed the job. It will be found necessary to replace the appliance once each day or two on account of its becoming soiled, but that is comparatively an easy task after the nurse or mother has learned the trick of manufacturing it.

This appliance will retain and cure nearly all cases of hernia encountered in the young, and thus avoid the bothersome task of trying to procure, adjust and retain a properly fitting truss from the stock of the truss maker.

We find the factory trusses are too cumbersome and are too readily displaced by contact with the clothing and in making the necessary changes of clothing required in cases of infants,

unless the elastic type of truss is used. The chief objection to that is, that it becomes soiled in a few days' wearing, cannot be washed without ruining it and it is too expensive to replace each time with a new one.

The treatment of rupture in infants should be instituted as soon as the trouble is discovered and kept up for at least one year to insure a perfect cure. While treatment in a great many cases might be discontinued with safety in less than a year, the majority require that length of time.

The line of treatment which I have outlined in cases of inguinal hernia is applicable to umbilical and femoral hernia, although the latter type is seldom encountered in the very young.

The mechanical or palliative treatment of hernia in the adult is of a very different nature from that of the infant. Here no promise of a permanent cure is made, although in rare cases where a correctly fitting truss is applied, when the hernia is of recent occurrence, cures do take place. Only hernia which are reducible should ever be fitted with a truss, as it is absolutely harmful to place a truss pad where it will exert pressure over incarcerated bowel, however, this is not true in cases where only omentum is present in the hernial sack. Here a truss may be adjusted to retain the bowel and the pressure exerted on the omentum may cause it to atrophy, and in some cases to adhere to the hernial sack, and thus aid in preventing the descent of the bowel.

Before selecting a truss for a given case of hernia, a close examination of the patient should be made as to the location, size and reducibility of the rupture. After satisfactory evidence has been obtained that a truss can be worn that will retain it, the size and variety should be determined.

The best method of ascertaining the size of truss required is to take a piece of lead tape one-half inch wide and one-sixteenth inch thick: place this across the front of the pelvis around the hip and across the back, then by having the patient stand with all clothing removed we can mould the lead exactly to the parts; at the same time a mark should be made on the tape to indicate where the pad or pads should be placed. Care should be taken to take the impression in line with the internal rings, when passing around the hip the tape should be slightly elevated to conform to a natural depression of the muscles on the sides and back.

A good guide to this is to place the tape midway between the great trochanter and the crest of the ileum on each side. The tape should then be carefully removed and laid upon a sheet of

paper, where a tracing can be made by a pencil passed around the inside of the tape. The principal reason for thus taking a measure is to get the exact form of the pelvis, which in no two patients is of the same contour. You can then bend the truss to fit the pattern on the paper and you will be avoided the embarrassment of fitting the truss on the patient numerous times, which is a very trying and vexatious procedure, especially if your patient be a female.

The best type of truss is today considered to be a hard rubber spring truss made to encircle the whole pelvis and to carry one or two pads as the case may require. It is considered best to fit a dummy pad on the opposite side in all cases of single hernia, thus assisting to hold the truss in place and if possible prevent a hernia on the sound side.

I mean by hard rubber that the spring is covered with a coating of hard rubber to make it smooth and of more elegant appearance. The pads are made of most all conceivable substances, such as hard rubber, celluloid, wood, leather, water pad, rubber sponge pads, etc. The shape also varies in the different types on the market from oval, concave, convex, round and triangular.

It is generally conceded that the hard oval pads are the best suited to inguinal hernia of the oblique type, but if we have to deal with a hernia coming through the muscles immediately outside and above the pubic bone it becomes necessary to fit this with a pad of soft texture, such as a water pad or one of the rubber sponge variety made in Akron.

A hard pad cannot be worn where it exerts a direct pressure against a bone without producing great pain and discomfort to the wearer.

The objections to pads of the soft variety are that water pads only last about one year, and gradually decrease in size even in less than a year, subjecting the patient to the risk of having his hernia come down unexpectedly because he has failed to notice the shrinkage of the pad, it having taken place so gradually; or if he has noticed it he has neglected replacing it and thus allowed his trouble to recur.

The rubber sponge pads are easy to wear and have a tendency to cling to the skin, but these advantages are more than offset by the fact that you cannot keep them clean, owing to their porous nature. The excretions from the skin penetrate the pores and there decompose, rendering the pad unwearable. The same is true of leather, which is not suitable in any case for a pad.

This last class of pads cannot be washed or cleaned readily, while the hard rubber, celluloid or wooden pads can be, thus avoiding bad odors and insuring a healthy condition of the skin beneath the pad.

It is also well known that the skin is more tolerant of the hard form of pad after it has been worn for a few days.

The smallest pad that can be found to retain the hernia should be selected. The reason is apparent that less spring pressure is required to hold a rupture with a small pad than with a large one, because all the strength is exerted on a smaller surface in the small pad. This is ideal because the least spring pressure necessary to

hold the rupture should be our aim, thus reducing the inconvenience and torture of the unfortunate truss wearer to a minimum.

As I have said, the best type of truss is a spring type encircling the body, which should be made of a flat shape, light in weight and about one-half inch wide and three-sixteenths inch in thickness. The adjustment or fastening should be behind and made by a strap hooked over anchoring pins, which are situated in the center of two round, flat, hard rubber discs one and one-half inch in diameter secured to either end of the spring. These discs are fixed on a swivel pivot which gives them the advantage of changing their angle with the spring without causing the spring to become displaced when the body of the wearer is in motion.

If a truss is properly fitted, no under-leg straps are needed to keep the truss in place. The strap under the leg is one of the most objectionable features of any truss and our aim should be to fit all cases without it.

There are numerous truss makers who can furnish this type of truss with slight variations.

Next we have to deal with a class of hernia that are not reducible, and for some reason, either they will not submit to an operation for the radical cure or are not in physical condition to undergo an operation, and perhaps a few cases cannot be cured by surgery. In these cases something must be done to support their hernia and prevent its becoming worse so as to give them a chance to walk about and at least partially enjoy their existence instead of becoming bed ridden for the rest of their lives.

A large suspensory can be made in cases of scrotal hernia, which is the most frequent type of irreducible hernia. It should be made of firm material, that will not only support the heavy mass, but also slightly compress it from the sides. It should be attached to the suspenders worn over the shoulders.

In case of hernia of other parts of the body, where reduction is not possible, a concave pad should be adjusted over it, made of hard material and secured with bandages, etc., as the case and location may demand. This treatment is not very satisfactory to the physician or the patient, but it is the best we have to offer, and something must be done in this unfortunate class of cases.

Much more could be said on the subject but I have tried to limit my paper to practical points which are of use in our practice every day instead of trying to explain the many phases of a much abused and neglected branch of the medical science.

I might add that a few instructions should be given to each patient that is fitted with a truss, which will help him in wearing it, and would take a long time for him to find out from experience.

Apply the truss before arising in the morning. Before applying it be sure that none of the hernia is protruding. Remove the truss after getting into bed at night. If correctly fitted it will require no attention during the day. In extreme cases a night truss may be needed and should be of the elastic type, the spring truss is not suitable to wear in bed. Infants and young children should wear the truss both day and night. Never get up and go about your room without your

truss on. Patients should when taking a bath keep truss on, wash the hard rubber truss—water won't harm it. Extreme cleanliness will add greatly to comfort. Bathing the skin at night with equal parts of alcohol and witch hazel will reduce irritation. The free use of good talcum powder in the morning is advised. The truss should be worn next to the skin, as it is not safe worn over the underwear. Any unusual abdominal pain or discomfort should lead to an examination of hernia. If protruding it should be at once replaced and the truss readjusted. This should be done while lying down if possible. If replacement of hernia is impossible and pain is severe, ice bag should be applied and physician sent for. Delay is dangerous.

public meeting will be held this month on "Tuberculosis."

The Monroe County Medical Society met in the Court House, Monday evening, March 28. The meeting was called to order by J. W. Norris, President. After the society finished its usual routine business, Dr. Norris introduced J. J. Osborn, President of the Ohio County (W. Va.) Medical Society, who read a very excellent paper on "The Management and Treatment of Pneumonia." The paper was an intellectual treat. The doctor gave his actual experience ("no theories were advanced") in the treatment of this subject, which is of universal interest. The subject was generally discussed. The meeting was instructive and profitable.

NINTH DISTRICT

S. P. FETTER, M. D., Collaborator

The Pike County Medical Society met March 7. E. W. Cornet read a very interesting and instructive paper on "Acute Nephritis." Dr. Caldwell reported a case of Appendicitis," Dr. Wilson, "Cirrhosis," Dr. Tidd, "Addisons."

TENTH DISTRICT

FRED FLETCHER, M. D., Collaborator.

Regular meeting of the Columbus Academy of Medicine, March 7.

C. M. Shepard related the history and presented skiagram of and impacted fracture of the hip. The patient, a female, aged 36, had sustained what she believed to be a trivial hip injury. There was neither eversion nor shortening. The X-ray showed the nature and extent of the pathology. The case was treated in an ambulatory manner—fixation of the hip with a plaster of paris spica, and the patient permitted to use crutches.

The report was discussed by J. F. Baldwin.

W. C. Davis reported a case of acute otitis media that was unusual in the respect that the pain was referred to the temporal region. The painful area was small and well defined. There was no history of ear-ache; in short, nothing to suggest a middle ear infection.

Discussion by L. T. LeWald.

Regular program: "Iritis," by W. C. Davis. Discussion: Drs. Heckler, Timberman, C. S. Means and J. B. Alcorn.

"Drug Addiction and Its Treatment," by E. E. Gaver. Discussion: Drs. G. T. Harding and C. M. Shepard.

The regular meeting of the Ashland County Medical Society was held at Ashland, Tuesday, March 15th, with the following program: Case report, "Enlarged Tonsils Neglected," F. V. Dotterweich; "Berlin as a Medical and Surgical Center," A. L. Sherrick; "First Aid to the Well," D. L. Mohn; "A Clinical Study of Thirty-two Cases of Arthritis, With Reference to the Uric Acid Diathesis," W. M. McClellan.

The annual report of the secretary showed an average attendance of above 62 per cent for the year. The reports of the president and treasurer also showed the society to be in a prosperous condition as regards membership and finances.

The result of the election was as follows: President, W. F. Emery; Vice President, Jacob Fridline; Secretary, W. M. McClellan; Treasurer, G. B. Fuller; Board of Censors, Frank Cowan, W. F. Emery and O. J. Powell; Auxiliary Committeeman, F. V. Dotterweich; Delegate to State Association, James A. Lingenfelter.

Following the annual meeting a banquet was given at the Hotel Otter, which was attended by almost the entire membership of the county, with their wives.

The Portage County Medical Society met March 10th, in the office of E. J. Widdecombe. W. S. Chase read a paper on "The Diet in Typhoid Fever," and C. O. Jaster, of Ravenna, addressed the society on the subject of "Glaucoma."

SEVENTH DISTRICT

S. O. BARKHURST, M. D., Collaborator.

The Tuscarawas County Medical Society met in Newcomerstown on March 1. The following program was given: "Pancreatitis," S. B. Hayes; "Indication for Operation in Gallstone Disease," E. A. Wolf; "The Significance of Jaundice in Gallstone Disease," J. J. Gooding. A

Special meeting March 14. The following program was presented: "The Practical Use of Vaccines," by Ernest Scott. Discussion: Drs. E. F. McCampbell, Charles J. Shepard, H. B. Clark, W. K. Rogers, L. T. LeWald and Professor Morrey of the State University.

"The Typhoid Gland—A Consideration of the Pathology and Treatment of Simple Goiter. Lantern Slides and Presentation of Gross Specimens," by Andre Crotti. Discussion: W. D. Inglis, E. F. Wilson and J. F. Baldwin.

Regular meeting March 21. Program: "Malaria Complicating Pregnancy," by H. H. Sniveley. "The Recognition and Treatment of Pyelitis of Pregnancy," by W. D. Inglis. Discussion opened by T. W. Rankin.

"Gonorrhea and Marriage," by S. S. Wilcox.

"On the Treatment of Ophthalmia Neonatorum," by F. W. Blake.

Discussion by E. W. Schueller, J. W. Wright, W. C. Davis, J. E. Brown, S. J. Goodman, J. B. Alcorn, G. W. Morehouse, and J. L. Gordon.

Dr. Blake said: For various reasons—to mention good policy for one—the profession should admit the causative factors in ophthalmia neonatorum may be streptococci or Klebs-Loeffler bacilli, as well as the gonococci of Neisser: though the treatment should be based upon the assumption of the presence of the most virulent infection.

The great danger in this disease lies in the infection of the cornea, and is largely dependent upon these conditions: The continuous presence of infective material resting upon the surface of the cornea; the lowering of the vitality of the cornea from the pressure of the swollen lids; and the possible mechanical abrasion of the corneal surface.

To meet these conditions, therefore, the cardinal points of treatment are cleanliness, disinfection, reduction of vascularity and careful manipulation.

By cleanliness, we mean a systematic, continuous routine, which involves the expenditure of much time, resolution, and some degree of skill. Not only must the pus be removed from between the edges of the lids, but the lids must be at least partially everted, and a stream of irrigation directed beneath them till all flakes and strings of matter have been washed out. The nurse should be warned that, should the pus ever be allowed to accumulate, she must protect her own eyes, when attempting to open the baby's eyelids; as a spasmodic contraction of the lids may project the pus for some distance. However, the aim should be to prevent accumulation;

and careful irrigation may be required at intervals of from fifteen minutes to a half-hour, day and night, according to the amount of flow. As a rule, the temperature of the irrigation should be near that of the body, as, otherwise, the shock of the cold excites a spasm of the lids, and may also prove serious in its influence upon the delicate organism of a new-born child. With the exercise of care, this cleansing may be thus frequently repeated, without appreciably disturbing the rest of the sleeping child. When irrigating, the head should be turned, and the nozzle directed, that the return-flow cannot reach the other eye: and, should but one eye be affected, the well eye should be protected by a sheet of celluloid sealed on its edges by adhesive plaster; and the baby should never be left lying on the side of the good eye. Sometimes, plaques of coagulated matter are found entangled in the convoluted folds of the swollen membrane, and may be removed more efficiently by the gentle use of a soft tuft of cotton, than by a forcible stream of irrigation. The fluid for irrigating may be normal salt solution or boric acid 3 per cent with borax 1 per cent.

Upon the first appearance of symptoms, the eyelids should be everted, and a solution of nitrate of silver, five grains to the ounce, applied to the mucous membrane, and this followed by irrigation. The repetition of this application should be governed by the quantity of discharge. No other remedy so well controls this symptom, or so efficiently destroys the germs of infection which often lie deep in the membrane.

A good way in which to make this application is for the physician and nurse to sit opposite to each other, the latter holding the baby on her lap with the head extended toward the physician, who holds it with a vise-like grip between his knees, having first thrown across them an oil-cloth covered with a towel. A wad of absorbent cotton to catch the irrigating fluid is packed alongside of the baby's head; several applicators, made of cotton-tipped toothpicks, and the irrigator are placed within reach, and also a receptacle to receive soiled pledgets, etc. The lids are washed and carefully dried with a loose pledget of cotton; and, if considerably swollen, the upper lid can be everted by drawing up the skin quite strongly, counter pressure being had from the bony edge of the orbit. This maneuver is more readily accomplished when the baby cries and contracts the orbicularis. With firm pressure on the brow, the lid may be maintained in eversion. The lower lid is always readily everted by downward traction, and this may be done by the nurse. Now, let the edges of the everted lids

approach each other till the cornea is covered; then apply the solution of silver on a softly tufted applicator and follow with a free irrigation. During the interval between the applications of silver nitrate, a 20 per cent to 50 per cent solution of argyrol may be instilled, two to four times a day.

It may be needless to emphasize the importance of scrupulous attention to the disinfection of the hands after treating such eyes, and to the prompt destruction of all soiled pledgets of cotton, etc.

Regarding reduction of vascularity, definite rules cannot be laid down. The structure of the tissues of the eyelids admits of marked tumefaction without a corresponding increase of tension; so energetic measures to control the swelling of the lids are not usually demanded. However, great care should be exercised that all manipulation of the lids be done with such gentleness that vascularity is not increased thereby. Cold applications are strongly insisted upon by many authorities, but the dangers, in prolonged use, to the vitality of the cornea, and, from a careless manner of application, to the health of the child, are not inconsiderable.

When the cornea is ulcerated, they are contraindicated. The use of light cold compresses, frequently renewed, immediately after the applications of silver nitrate is good practice; or a solution of adrenalin, 1-10,000, may be dropped in the eye at this time to control the turgescence.

At the first evidence of corneal involvement, atropine should be instilled; but it is not the intent of this paper to discuss the complications of this infection. Its object is but to rehearse the general indications for treatment and to describe one method as carrying out the same that has proved satisfactory.

Dr. Wright's discussion of Dr. Blake's paper: Crede's method of instilling into the eyes of a newborn child a 2 per cent solution of nitrate of silver has doubtless saved thousands of persons from an impending and incurable blindness. The employment of this remedy was not empirical, but followed in the light of the discovery of the gonococcus, now the recognized cause of the infection. This germ was discovered in 1879, and Crede published the preventive in 1884, and the method, as practiced by him at that time, is today regarded as practically an absolute certainty in preventing this disease. Strange to say, very few objections have been raised against the method, the principal of which are that it is painful and has irritating properties. These objections are doubtless well founded, but so far as I know there has never been expressed the very least doubt regarding the efficacy of the silver solution as a germicide in the prevention of ophthalmia neonatorum. Naturally other reme-

dies have been suggested intended to eliminate the objection referred to against the nitrate of silver, and which are probably as good and perhaps better, according to our personal experiences. Among these may be prominently mentioned the mercuric bichloride sol. 1-5000, which is very much milder and far less irritating and perhaps more potent as a germicide in this affection. Then there is argyrol solution, doubtless equally effective as a germicide and absolutely without painful or irritating properties. There have been reported several cases of long continued inflammation to follow the use of the nitrate of silver solution as a prophylactic.

While we are considering the prophylaxis it is but natural that we should consider the treatment.

It must be understood that all purulent ophthalmias are not of gonorrhoeal origin; perhaps one-third of them are not; for there are other pus-producing germs that affect the eye beside the gonococcus; but all conjunctival inflammations in the newborn should receive immediate attention, just as if we knew them to be of specific origin. These cases are usually in the hands of the family physician and his ideas in regard to the treatment should be clear. The first thing for him to remember is that it matters not whether the inflammation is due to the gonococcus or some other pus-producing germ, the treatment is the same. It is no time now to haggle over the matter as to whether the husband has communicated a gonorrhea to his wife, or whether she had in some mysterious manner become infected. The disease having set in, prompt action is required. The child should be sent to the hospital, where it can have constant attention, or, if it remains at home it should be placed under the care of a trained nurse. As a rule the physician is not called in until the disease is well developed. If he is called before the active stage has set in it is fortunate, for with proper treatment practically every case will be saved. While instillations of eye solutions at the inner canthus on the onset of the affection, or in ordinary conjunctival inflammations, reach all parts of the conjunctival sac almost instantly; however, if the active stage has set in and there is much swelling and chemosis, solutions thus applied are ordinarily of very little value. Any attempt to evert the lids during this active stage for the purpose of applying treatment is meddling interference. Solutions that are intended to come into contact with the conjunctival sac, must be applied before and after this active stage. And here I may say that if the case is seen early and the proper treatment has been applied there need not be a very active stage. The trouble is, we are usually called in during the height of this active inflammatory stage, when our services are much limited.

In the treatment of this affection one thing above all others must be our effort, and that is to preserve the integrity of the cornea. As long as it remains clear and bright we are on the safe side, but when it becomes steamy or opaque or staphylomatous or ulcerated we are positively within the danger line.

To make the subject clear in reference to the preventative treatment, there are three remedies of perhaps equal value as germicides, the nitrate of silver, the bichloride of mercury and argyrol.

For the treatment after the affection has set in I believe that the nitrate of silver solution of any strength may very properly be omitted. The laboratories have revealed to us the fact that this solution causes the albumin to coagulate, searing, as it were, the denuded epithelial surface, thus preventing its entrance into the intra-cellular spaces, where the gonococci are secreted. Where it does not destroy the cells it puts them in a state of less resistance.

Bichloride of mercury is said to have about the same objections as the nitrate of silver. Argyrol solution, on the other hand, has been demonstrated to have a special tendency to pervade the intra-cellular conjunctival spaces, and that during the very active stages of inflammatory action. For myself, after a reasonable trial with all the remedies mentioned, I now use exclusively as a germicide in ophthalmia neonatorum a 12 per cent solution of argyrol. Argyrol solution deteriorates, and should be prepared fresh every twelve hours.

There has been a great diversity of opinion with regard to the application of heat and cold to the eye. A very few years ago this subject was taken up by the section of ophthalmology of the American Medical Association and the consensus of opinion was in favor of water as hot as could be borne, and this through all the varied stages of the affection.

Hugh A. Baldwin presented two pathological specimens:

(1) A kidney removed March 22 from a patient gave the following history: Male, aged 34. Mother died of tuberculosis. Had had cystitis for fifteen years, varying in intensity, but growing progressively worse. Urination always frequent and painful. January 15 had an attack of severe pain in the right side. Bloody mucous in stools and bloody urine. Has had severe pain ever since. A lump has been apparent in the right side for three weeks. It could be felt anteriorly under the ribs, but there seemed to be a slight area of resonance between this and the liver dulness. Posteriorly there was a mass indicative of peri-nephritic abscess.

The usual oblique lumbar incision opened into an abscess and gave vent to a large amount of pus. The kidney was palpated and found too large to be removed easily through the incision. It was therefore reduced in size by allowing some of the purulent contents to escape, and then delivered and removed.

(2) A kidney removed March 19, from a woman who, twelve years before, began passing purulent urine with increased frequency. This condition grew progressively worse until it was necessary at times for her to urinate every fifteen minutes. Had some pain and tenderness in the left side. Ureteral catheterization demonstrated clear and normal urine from the right

kidney, but only a small quantity of very purulent secretion could be obtained from the left side.

Nephrectomy, made with great difficulty owing to many adhesions from years of inflammation, revealed the kidney with almost total destruction, and containing a large calculus.

Both these cases had been treated unavailingly for many years. They had even been in hospitals for study and treatment, and yet the real cause of the cystitis had been overlooked, and the patients allowed to suffer needlessly. These cases serve to emphasize the point that cystitis is practically never primary. Every case of persistent cystitis should be thoroughly studied until the real cause is discovered.

Both patients stood the operations nicely, and are now convalescent.

L. T. LeWald related the history of a recruit who had been examined by three medical officers and admitted to the army with the diagnosis of a functional murmur—which was systolic in time and heard best over the left base. The man was in perfect health. His history was negative. Recently he contracted cerebrospinal meningitis and died. At autopsy an examination of the heart disclosed a fibrous band extending across the entire width of the upper part of the left ventricle. The valves were normal, and the heart showed no pathology. Dr. LeWald made the point that we should not be in too much of a hurry in saying positively that every cardiac murmur is organic.

The specimen was presented.

Special meeting March 28, when the Academy entertained E. Gustav Zinke, of Cincinnati. A synopsis of the paper presented by Dr. Zinke, "Puerperal Fever as We Know It Today," follows:

"History—Definition—Frequency: Oliver Wendell Holmes, Semmelweis, Pasteur, Koch, and Lister. Puerperal fever is invariably an infection. Present mortality in lying-in hospitals is 0.1 per cent, in private practice 0.4 to 0.5 per cent. Present morbidity four to five times higher than mortality. Pathology: Puerperal sapremia—wound intoxication. (Putrid endometritis, putrescentia uteri). Puerperal septicemia—wound infection. (Septic infection through the blood and lymph vessels.) Phlegmasia alba dolens, abscess and gangrene of leg, para-metritis, pelvic abscess, septic peritonitis, pyemia, endocarditis, endarteritis, bacteriemia. Diagnosis and symptoms. Prognosis. Treatment—local, general, and operative. The value of antistreptococcic serum in puerperal septicemia."

NEWS NOTES

Ernest Scott, M. D., and E. F. McCampbell, Ph. D., have opened up pathological laboratories at No. 207 East State Street, Columbus, Ohio.

The graduates of Jefferson Medical College of Dayton, gave a dinner at the Dayton Club on the night of March 15th, for the purpose of organizing "The Jefferson Medical Alumni Association." The following temporary officers were elected: A. H. Dunham, Dayton, Chairman; Fred Fletcher, Columbus, Secretary, and R. S. Gaugler, Dayton, Assistant Secretary. The following committees were appointed: Constitution and By-Laws, W. A. Ewing, O. M. Rott and Floyd Smith; Committee of Arrangements for the Toledo Meeting, Ralph W. Stewart, Peter Donnelly, and Walter W. Brand, of Toledo.

The Association will meet at the time of the annual meeting of the State Medical Society. The temporary officers have arranged for a "Jefferson Smoker" on the first night of the Toledo meeting, May 11, 1910. At this meeting permanent officers will be elected and a constitution and by-laws adopted.

There are over 200 Jefferson graduates practicing medicine in Ohio, each of which shall receive, at a later time, a letter of information concerning the "smoker."

HOSPITAL CHANGES.

The following changes in the staff of the Cincinnati Hospital are announced: Junior Surgeon, Dudley W. Palmer; assistant radiographer, Wm. Doughty, and curators, Albert J. Bell, vice Chas. S. Rockhill, recently appointed physician of the Branch Hospital, and Jos. T. Kennedy. Goodrich B. Rhodes and Eugene S. May.

PERSONAL.

Henry Martin Fischer, formerly professor of physiology in the University of California, has been appointed to the lately-endowed Eichberg chair of physiology in the Ohio-Miami Medical College, and Charles Gossmann has been appointed demonstrator of pathology in the college.

Nathaniel P. Dandridge, clinical professor of surgery, Alexander G. Drury, professor of hygiene, and Edmund W. Baehr, assistant professor of physiology in the Ohio-Miami Medical College, have resigned.

MEDICAL PERIODICALS IN PUBLIC LIBRARY.

The Columbus Medical Library Association has furnished the librarian of the Columbus Public Library a list of forty domestic and twenty-eight foreign medical periodicals, which are to be placed on file in the library.

MARRIAGES

Thomas A. Speidel to Miss Marie Boughton of Felicity, Ohio, February 27.

C. P. Linhart to Mrs. Lucy Crawford De Voil of Columbus, February 27.

DEATHS

E. C. Crum, Miami College, 1870, died at his home in Dayton, March 4, from apoplexy, aged sixty-two.

J. D. Johnson, Eclectic Medical Institute, Cincinnati, 1888 died at his home in Wharton, from self-inflicted injuries. February 26, aged sixty-four.

G. W. Clemmson, Starling Medical College, 1874, died at his home in Thornville, March 7, from tuberculosis, aged sixty-one.

Adam Averfield, University of Michigan, 1870, died at his home in Toledo, February 27.

F. C. Abbott, University of Louisville, 1908, died at the Springfield City Hospital, March 5, from enteric fever, aged twenty-nine.

Anson Hurd, Starling Medical College, 1852, died at his home in Findlay, February 18, from senile debility, aged eighty-five.

B. R. Parke, Jefferson Medical College, 1870, died at his home in Wellsville, February 18, from cerebral hemorrhage, aged sixty-seven.

R. F. Lamson, Cincinnati Medical College of Medicine, 1877, died at his home in Bryan, February 10, from senile dementia, aged seventy.

T. P. Taylor, Eclectic Medical Institute, Cincinnati, 1881, died at his home in Celina, February 19, from apoplexy, aged fifty-one.

H. E. Munn, Eclectic Medical College, New York, 1873, died at his home in Toledo, November 23, 1909, aged fifty-nine.

F. E. Machette, Medical College of Ohio, 1877, died at his home in Greenville, February 16, from pneumonia, aged fifty-nine.

William Ward (years of practice), died at his home in Harveyburg, December 10, 1909, from angina pectoris, aged eighty-eight.

D. S. Lyman, Medical College of Ohio, 1847, died at his home in Goshen, February 27, aged eighty-eight.

H. K. Cushing, University of Pennsylvania, 1851, died at his home in Cleveland, February 12, from apoplexy, aged eighty-two.

W. H. Taylor, Medical College of Cincinnati, 1858, died at his home in Cincinnati, February 6, from chronic nephritis, aged seventy-four.

G. E. Brattain, Medical College of Ft. Wayne, 1882, died at his home in Wapakoneta, January 28, from pulmonary hemorrhage, aged fifty-one.

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ORIGINAL ARTICLES

THE PROGRESS OF ALIENISM

C. S. M'DOUGALL, M. D.

Athens.

[Read before the Ohio State Medical Association.]

Those most familiar with the history of the lives and actions of the ancients have reached the inevitable conclusion that insanity was manifested by peoples of the oldest known civilization, and the "madman," as he was generally regarded, was a recognized character among his fellows. Although a certain few were looked upon as 'mad' and regarded as more or less irresponsible, they were generally considered as evil possessed, criminal, cruel and bloodthirsty, and were treated accordingly by being imprisoned, tortured, punished and neglected by the common people, and fared but little better at the hands of the priesthood who pretended to cure them by casting out the evil spirits with incantation and prayer.

This condition continued until near the close of the eighteenth century, in 1792, when by strange coincidence two independent movements respecting the physical welfare of the insane were inaugurated and scientists for the first time began to study questions concerning the relations of body and mind.

If there is one name that deserves to be kept fresh in the memory of friends of the insane all over the civilized world it is that of Dr. Pinel, who in 1792 opened the dungeon doors, broke the shackles and brought from their filth and solitude to the fresh air and sunlight the insane in the Paris hospital (Bicetre), where he instituted for them rational and humane treatment. After remaining there two years he went to Saltpetriere, where he accomplished the same reforms for the female insane. This was accomplished in the face of great opposition and little assistance and at the risk of his life and liberty.

With the name of Pinel should be that of William Tuke, who at the same time, but inde-

pendent of any knowledge of the reforms in France, established in England a private institution, York Retreat, where the insane were treated according to his own ideas of doing for others as he would be done by under like circumstances. Though the reforms instituted by these men were enthusiastically received by the civilized world, Esquirol, pupil and emulator of Pinel, twenty-five years afterwards, upon making an official investigation in the various establishments where the insane were kept in France, declared they had not progressed one step, but his appalling report of the care and treatment the insane were receiving gave a new impetus that finally, under the leadership of Dr. Ferrus, after eighteen months' debate the lunacy law of France was enacted in June, 1838. This law required separate institutions for the insane, medical attendance, and restricted the use of mechanical restraint, drugs and especially blood-letting.

In England the reforms at York Retreat were extended by the followers of Tuke, Gardiner Hill, and Charlesworth to Lincoln Asylum, where these men by persistent efforts gradually introduced non-restraint methods which were later carried into full effect by Dr. Connolly at Hanwell Asylum.

Dr. Connolly, who became the most ardent apostle of the non-restraint treatment of the insane, formally established this method by publicly burning every shred of an habiliment bearing the semblance of restraint at Hanwell Asylum, in 1837. This was two years before Ohio's first institution. The Ohio Lunatic Asylum was opened for patients, yet it is within a score of years that some of our asylums relegated to the relic room the barbarous muffs and straight-jackets and inhuman cribs, and it is to be feared that some of these devices of the dark ages have in quite recent years silently returned. Although Ohio can lay claim to some of the most learned and practical alienists of recent times, exponents of non-restraint and humane methods of treatment and of having within her borders model institutions, and still retains some

of her glory, yet it is to be feared that the pendulum has swung backward—the alluring but nefarious “low per capita cost” seems with some of the controlling powers to shine brighter than the older guiding star of humanity. It seems to be not how well but how cheap can these unfortunate wards of the state be cared for, not how many mothers can be returned to their children or fathers to resume the place of protector and bread-winner for their helpless little tots, but how many dollars can be returned to the treasury or political obligations paid.

Coincident with the first reforms affecting the physical welfare of the insane were the first questions raised concerning the relations of body and mind by scientists, notably Dr. Gall, the founder of a quasi science called Phrenology, who attracted public attention by being silenced as a lecturer in Vienna by the Austrian government, because of a supposed conflict of his doctrine of mind with the dogmas of religion. Subsequent investigation has established the major proposition of Dr. Gall's theory and furnished to psychology a foundation of facts upon which to construct a rational superstructure. To Herbert Spencer is due much of the credit for our present scientific psychology. Spencer's *Principles of Psychology*, published about the middle of the last century, has endured the criticisms of evolution and furnished alienism a wealth of facts and principles from which has been worked out, mainly by Dr. Charles Mercier of London, an exposition of the normal states and processes whose disorder constitutes insanity.

Dr. Mercier was the first to study mind in connection with nervous activity, and while he does not attempt to add to the number of observed facts, but deals with those already possessed in new ways. His analysis of the origin, essential nature and conditioning factors of the nervous discharge, the nervous mechanism of muscular actions and movements, and the co-ordination of movements into acts and the co-ordination of acts into conduct, has been complete and masterly and furnishes the means for a better understanding of conduct, which is the most essential factor in the study of insanity. The study of the psychological function of the nervous system is, briefly speaking, the study of conduct. That dynamical adjustment of the organism to its environmental conditions we call conduct is the outward manifestation of intelligence, and it is by conduct and conduct alone that we can judge of one's intelligence or of their sanity or insanity. There are four standards according to which intelligence in conduct is estimated. The four forms of intelligence are

manifested in novelty, elaborateness, precision, and by conservation or by what is generally known as getting along in the world, or the ability to extract the greatest benefit from the circumstances surrounding the individual. It is the disorder of this last form of intelligence that constitutes insanity. However lacking a man may be in originality, unless it reaches the extreme degree that he is not able to vary his daily conduct to meet the slightly changing circumstances of one day with another so that he is vitally affected, he is not called insane. Unless a man is too lacking in elaborateness of his daily conduct as not to be able to vary them sufficiently to get from them a living or fails to include some circumstance that is necessary to his existence, he is not regarded as insane. Neither is the lack of precision or skill in the performance of any operation, unless it be of so extreme a degree that it interferes with the earning of a livelihood. A man may possess a high degree of inventive genius, he may be able to work out elaborate and complicated problems, or able to reproduce with wonderful precision and neatness the plans for a complicated structure, yet no matter to what high degree he may possess one or more of these three forms of intelligence, if he does not extract from them sufficient amount of benefit to provide for himself, the question of his sanity is at once raised. A man may start out on a course of conduct and display a high degree of some form of intelligence, but if he continues this course to the exclusion of his daily needs and allows himself and those dependent upon him to be reduced to penury and want, he is by common consent considered a lunatic. By this mode of dealing with the nervous system or objective psychology, which deals with matter and motion and not in its connection with mind, it has been possible to determine the form of intelligence whose disorder constitutes insanity.

In dealing with the mind proper, subjective psychology, we know that mind is made up of feelings and thoughts, and if feelings of high complexity and thoughts of high complexity are each of them composed of multitudes of both feelings and thoughts of simpler character, then intelligence can not be disordered without disorder of feeling. Neither can feeling be disordered without disorder of intelligence, likewise intelligence can not be disordered without disorder of its outward manifestation, conduct.

Thought may be regarded as the process of establishing a relation between feelings or clusters of related feeling, or it may be regarded as the process of establishing relations in the

organism in correspondence with relations in the environment. By this latter view of mental relations we can investigate the precise form of disorder that may affect any thought or group of thoughts and to say precisely in what manner and to what degree it is disordered.

By this method alienism has progressed to the point of determining that insanity is not only a disorder of mind, but a disorder of conduct as well, and though it is not known why or how, yet it is known that mind or consciousness is evolved during the workings of the highest nervous centers. It is also known that these highest centers actuate conduct. If the working of these highest centers are accompanied by consciousness and actuate conduct, then to have disorder of consciousness and disorder of conduct there must be in every case of insanity three factors—a disorder of the highest nerve arrangements, disorder of conduct, and disorder of consciousness; and in every case disorder of consciousness includes disorder of thought and of feeling, of self-consciousness and of consciousness of the relations of self to surroundings. In no two cases, however, are these various factors combined in quite the same way, and no two cases precisely resemble one another, and on the way in which they are combined depends the form which the insanity assumes.

Though like the attempts to define insanity, the number of classifications is equal to the number of writers on the subject, of which we have, as a distinguished medical authority said in reference to the treatment of whooping cough, that a suspiciously long list of remedies has been suggested, yet I believe the latest practical material advance in alienism is Dr. Mercier's classification of insanity, in which he makes a clear distinction between forms of insanity and varieties of insanity. He defines a form of insanity as a certain aggregate of symptoms that a case of insanity presents at one time. By a variety of insanity is meant a specific course that a case may run from beginning to end, usually combined with an assignable cause. A form corresponds with what is ordinarily called a disease, which may exhibit different symptoms at different times or at the same time. In every case of insanity we have exhibited to some degree the form, of weakmindedness, yet in most cases there is some other more conspicuous element for which the form is named, and in many instances the disease is named for its most prominent symptom. The forms of insanity given by Dr. Mercier are: Weakmindedness, stupor, depression, excitement, exaltation, suspicion, sys-

tematized delusions, obsession and impulsiveness, and moral perversion.

The varieties of insanity are: Idiocy and imbecility, dementia, stupor, acute delirious mania, acute insanity, fixed delusions, paranoia, folie circulaire, insanity of reproduction, insanity of times of life, insanity of alcohol, general paralysis, insanity of epilepsy, and insanity of bodily disease. This classification seems to be not only scientific, but lucid, practical and comprehensive, and is broad and elastic enough to admit clinically (at least within my own experience) all cases. Dr. Mercier's treatise on the dynamics of the human organism, is the only attempt to offer a complete study of the normal conditions, whose disorder constitutes insanity, and it is to be hoped that those who still regard a knowledge of normal conditions in studying the abnormal in insanity as unnecessary will before offering too severe criticisms of this method acquaint themselves with an analysis of these conditions by Great Britain's most prominent alienist.

The advances that I have attempted to outline with the essential and worthy if less important work of others during the past twenty years has placed alienism abreast with the other departments of medicine. With our present knowledge of the nervous system and its disarrangements and diseases, its susceptibilities, and amenabilities to treatment, there seems to be but one rational course to pursue, if alienism is expected to keep pace with the other departments of medicine, and that is to return the care and treatment of the insane to more professional methods and management. Ohio's first institution for the insane had its origin in a memorial sent by the Ohio Medical Convention (the first state medical organization) to the legislature; fathered and guided by the medical profession through their infancy and growth and until they became models of their kind; admired and envied the world over. During this time the profession was well and prominently represented on every board of trustees, but when some twenty years ago the politicians spied them as objects of patronage, and the welfare of their inmates was soon sacrificed for that of the politician. Medical men were no longer needed on the managing boards, they demanded too much consideration for the patients and not enough for the politician's impatience, and may it be said to their credit, that under these conditions they disappeared one by one until only one remained on the seven boards of trustees and this condition existed for nearly ten years. A distinguished governor of our beloved

state, in a public address gave himself great praise for having appointed three expert alienists on the building board of an asylum the state was constructing at the time the foundations of the buildings were being put in with three expert alienists to direct the excavation and masonry, yet on the boards of the other six where nearly ten thousand patients were being treated, there were two general practitioners.

Some of the most careful, interested and intelligent observers of the working of our eleemosynary institutions believe that, regardless of the great strides made in our knowledge of the normal and morbid conditions of the nervous system and improved methods of treatment, the care and treatment of the inmates of some institutions at least is not equal to that of twenty years ago, and it requires but a brief retrospect of the past to gather from the teachings of experience, that their only hope of receiving the benefits of modern methods is from the medical profession. Place the trusteeship of our state hospitals within the control of men who know that modern equipment and modern methods are necessary to the accomplishment of modern results and who are unselfish and humane enough to see that such equipment is provided; men who know that the inmates of these hospitals require special care and treatment, and that only those who have had special preparation and experience are capable of dealing successfully with these patients, these wards of the state, who, those in control should see were given every opportunity for restoration of reason and health. Diseases of the mind is as much a specialty as diseases of the eye or ear, and who would for a moment tolerate the idea of placing other than a trained oculist and aurist in charge of an eye and ear hospital, yet, they place men in charge of hospitals for the insane who have had no special training and even after they had abandoned the profession, also select assistant physicians with no regard to their fitness for the duties they have to perform and without professional experience of any kind, and place them in charge of patients whom they know not how to treat and control, and resort to the promiscuous use of depressing drugs, mechanical restraint and often violent means and even manslaughter.

Our knowledge of mental diseases admits of their being specifically classified, and enough is known of the underlying morbid conditions and clinical features of the various diseases to predict the course, duration and termination with as much accuracy as can be done with physical ailments and they yield as promptly to therapeutic measures. There is no more promising field for

opsonic therapy, the latest material addition to therapeutics, than nervous and mental diseases.

It should be the duty of the medical profession to urge upon our great state that every means at our command should be utilized for the relief of her afflicted citizens, in public as well as private institutions.

DISCUSSION.

George Stockton, Columbus: I have very little to say in regard to what the doctor has stated concerning the classification of insanity. I know very little about Mercier's books. I read his work on insanity some years ago. I regard Kraepelin's classification as the best we have up to the present time. My reason for this is that it has cleared up lots of obscure psychological conditions, which we could not formerly place under any other classification. Notwithstanding the fact that Kraepelin's approaches perfection, we still have many cases of mental disease which we have difficulty in classifying.

In regard to having medical men on boards of trustees of our state institutions. I am acquainted with a man in Columbus who stands high in the medical profession, who has been offered the trusteeship of institutions, and he refused simply because he could not afford to leave his practice and put in several days each month in visiting an institution, for which he received no compensation. He would undoubtedly make a very valuable member of the board of trustees. I can see many advantages in getting a good physician on a board if you can get the right kind of man.

In regard to the subject of restraint in public institutions. Dr. McDougall is right. I remember treating a man at one time who had a suicidal mania, one of the most aggravated cases I ever saw. He was restrained in one of the so-called cribs which were in use at that time. The use of a crib would hardly be permitted at this day and age. The patient I speak of, however, recovered and lived at home in comfort for seven or eight years, when he again became insane.

There are certain cases where mild restraint is really necessary, a light jacket can be used, made out of muslin, in which the patient can have comparatively free use of the hands, and will not complain particularly of restraint.

Restraint is advisable where the patient plucks out his hair, pulls out his teeth, and picks out his eyes, etc.

If institutions were not so crowded, restraint might possibly be done away with in time entirely.

Insane people live just as long as an ordinary person. As they become older they become restless and untidy, difficult to manage and have to be carefully watched in order to prevent their injuring themselves. These old and decrepit cases in their restlessness often fall out of bed, and in many instances, this means a fracture of the thigh, and consequently, death. By putting a sheet across the bed and tucking it in at the sides, you can frequently restrain these people sufficiently to prevent their falling out of bed as stated above.

Of late years the wet pack, or what is known as the neutral pack, is found of great advantage as a means of treatment, as well as a form of

restraint. Wring a sheet out of luke warm water, and lay the patient on it, then bringing it up and wrapping it around the form, afterwards covering the person with a blanket or comfort, acts beneficially as a means of treatment as well as a mild form of restraint. Muffs and strait jackets should be used only as a last resort.

Dangerous convicts, such as we receive from the Ohio Penitentiary, necessarily have to be restrained in order to prevent them injuring others. Last summer we had a man who broke away from the attendant and stabbed two other men; after that we did not allow him to go out in the grounds without some sort of restraint to prevent him from injuring the attendants.

Insanity among convicts is very often brought about by vicious habits, and the individuals retain their dangerous proclivities. I do not believe that the life of a man, a valuable attendant, should be placed in jeopardy in caring for this class of cases. Naturally, the opening of the asylum for criminal insane at Lima, Ohio, will remove a large number of cases from our state hospitals.

Dr. C. S. McDougall, Athens: I only wish to say one or two things in reply to the discussion of my paper. One is in regard to Dr. Stockton's suggestion that he does not believe we could get good doctors to serve on the boards of our charitable institutions. I don't see why we cannot now, as well as in years back. When such men as Dr. West, Dr. Godfrey, Dr. Waddle, and other physicians of equal prominence, were willing to serve and were the very best men we have ever had as trustees. Take the management out of politics and there will be no trouble to get good doctors to serve—it has been done.

I agree with Dr. Stockton, that occasionally sleeves are all right, but when I see as I did in one of our state institutions, but recently, a patient with acute insanity of the excited form, in sleeves and tied to a bench, I cannot help but think it time for some one to say something in the way of protest. During the four years I served as an assistant physician in one of our state institutions—and that was twenty years ago—patients were not even allowed to be secluded without consent of the superintendent. We received one patient that had been secluded for seven years in another institution and after the first few weeks, was never secluded and was one of the most tractable patients in the institution.

While I believe restraint is a valuable means in the care and treatment of the insane, yet it is so likely to be abused, that it should only be accessible under the most rigid precautions.

As to the classification of insanity, that, of course, has been largely a matter of taste, as Dr. Stockton says. Yet, since I have become familiar with Dr. Mercier's classification, I much prefer it to the others because it is lucid, practical and scientific, and the only classification that makes a distinction between forms of insanity and varieties of insanity. It maintains the same principles throughout, as none others do, and the clinical grouping is the most comprehensive to me of all, and anyone familiar with this classification will, I feel certain, realize that a very material advance has been made in our knowledge of insanity, both clinically and scientifically.

TREATMENT OF "CHOKED DISC" WITH SPECIAL REFERENCE TO DECOMPRESSION TREPHINING.

ALBERT RUFUS BAKER, M. D.,
Cleveland, O.

[Read before the Ohio State Medical Association.]

Shortly before your secretary wrote me for the title of my paper, I had one of my patients, for whom I had proposed a decompression operation, taken from the hospital by the family physician. As this was the second time I had had a similar experience during the past year, I thought it might be a profitable subject for discussion, as it seemed to me that the general practitioner, and even some specialists, did not quite fully understand the purpose and object to be gained by the operation.

Ever since my earliest ophthalmological practice, I have always held that a "choked disc" was a pressure symptom, and my earliest attempts at relief were by incising the optic nerve sheath. I found this a somewhat difficult procedure, especially in cases in which the eyes were deep in the orbit. In fact, to accomplish the purpose satisfactorily, I found it necessary to divide one of the recti muscles and roll the eyeball over forcibly. At one time I devised a long curved needle which I attempted to pass behind the eye-ball into the sheath of the nerve, and aspirate; but I did not find this as easy as I anticipated, yet either incision or aspiration were not impossible, and if the results had been satisfactory, the operation could be made a practicable one. The improvement of the vision which took place in some cases was very brief, usually for only a few days and at most a few weeks, so that it was necessary to repeat the operation. The second operation I found even more difficult than the first, so that for the last ten years I have abandoned it entirely.

Some years since, when lumbar puncture became the fashion for almost all kinds of brain and spinal diseases, I thought possibly it might have a field of usefulness in the relief of "choked disc." While my experience in these cases is somewhat limited, I think that it was performed at my suggestion in eight or ten cases, in some of which we thought that there was slight improvement of vision, yet the results were not such as to encourage us to continue its use, and I believe its usefulness should be limited to diagnostic purposes. Usually the diagnosis between "choked disc" and optic neuritis is easily made, yet there are cases of doubt, and an examination

of the cerebro-spinal fluid may be of value. In several cases of albumin-uric retinitis, I have seen an almost typical "choked disc." There is a good illustration of one of my cases in Ball's Modern Ophthalmology. In that case there was sudden death with pressure symptoms such as we have in brain tumor. It is possible decompression might have prolonged life, although I have never advised it in such a case.

It has always been my custom since my earliest practice, in cases of brain tumor with "choked disc" to advise trephining to relieve the pressure. I do not know who first made the happy choice of the term, "decompression operation." While I have made some of the operations myself, I have generally referred them to the surgeon, and consequently have not kept a very accurate record as to the number of cases, or as to the results of the operation, as the cases usually drifted from under my observation before death. The late Dr. R. A. Vance, whom the older members of the section will remember, was particularly impressed with the improvement of vision, the relief from pain, and the prolongation of life by this operation, and made it many times at my suggestion, and not infrequently called upon me to examine the eye grounds in cases in which he suspected brain tumor. In the early years of my practice I was content to trephine, in many cases not even incising the dura. After the somewhat brilliant work of Horsley and others in removing brain tumors, we were not content with simple trephining, but in most cases attempted to locate the tumor, in which, I regret to say, we were almost always unsuccessful, and I fear in a number of cases hastened the death of the patient. I find, however, that the argument that if we failed to locate the tumor we would relieve the headache and preserve the vision, made it much easier to secure the patient's consent to the operation. As intimated in the beginning of this article, I have usually had less trouble in persuading the patient to have this operation than the family doctor, a peculiar twist in the average doctor I have never been able to explain. It was only a few years since we could scarcely persuade the average doctor to consent to adenectomy or even a tonsilectomy, and now they have suddenly gone to the other extreme and are much disappointed if we do not remove adenoids and tonsils from little patients who have never had any large enough to do any harm. Ovariectomy was fought by the general practitioner for thirty years. Appendectomy was ridiculed as the "American disease" by the German professors while I was a student in Berlin and Vienna, and thyroidectomy is now in the throes of a similar

experience, although it seems to me that the general practitioner has been remarkably ready to accept the operation in ex-ophthalmic goitre.

While the decompression operation is not a life saving one like ovariectomy, appendectomy or the mastoid operation, and the cases in which it is indicated are relatively rare, yet there is undoubtedly a field of usefulness for it, and it would seem that any educated physician ought to accept it when advised by a competent oculist.

In every case of "choked disc," before suggesting operation, the patient should be subjected to a most vigorous course of treatment with mercury and iodides, even though non-syphilitic. Non-syphilitic cases are often greatly benefited, if not cured by this treatment, and the specific ones, if too much damage is not already done, will be cured completely. They will tolerate immense doses of K. I. In most instances will take 400 or 500 grains daily, and not infrequently I have given from 700 to 900 grains with most beneficial results. In order to give these large doses of iodide of potash, it is necessary to combine it with mercury, and administer lots of water, both outside and in. Daily hot baths are essential. It is better if possible to give hospital treatment rather than attempt to carry it out at home, although it can be done successfully in the homes of the better class of patients.

Without having any available statistics, I would say in a general way that in my own experience more than 50 per cent of the cases of "choked disc" have been cured with mercury and iodides as above. Not infrequently, even in non-specific cases, the iodide of potash reduces the amount of the swelling of the optic nerve, relieves the headache and restores vision. Many years ago I reported a case of a fifteen-year-old boy whom we kept in the Cleveland General Hospital for several months. He suffered from intense headache and temporary failure of vision, which could be relieved in less than an hour by a very large dose of iodide of potash. By the use of this remedy he was kept quite comfortable, but eventually there began to be some contraction of the field of vision, and I advised a trephining operation. This was declined by the parents. He was taken home, and the following night had one of his attacks of headache, and a young physician was called in who gave him a hypodermic of $\frac{1}{8}$ gr. of morphine. The boy went to sleep and could not be aroused, and died before morning. An autopsy showed a tubercular tumor about $1\frac{1}{2}$ or 2 inches in diameter at the floor of the fourth ventricle. The ventricle was enormously dilated and contained almost a pint of fluid. The young physician was accused of giving too large a dose

of morphine, and it was only with great difficulty that we avoided a mal-practice suit.

If the patient is not cured by the use of the specific treatment, and the swelling of the disc continues, or if there is any failure of vision, a decompression operation should be made at once, and should not be postponed until serious loss of vision occurs, as it may not be restored. The operation itself is not a dangerous one, and if carefully performed under antiseptic conditions should be free from risk. In several of my cases the operation has been followed by an enormous cerebral hernia. The condition is rather a discouraging one, and while it relieves the patient from pain and loss of vision, and his life is somewhat prolonged, yet the horrible appearance presented makes us doubt sometimes whether an earlier death would not have been preferable.

The March number of *The Ophthalmoscope* contains a good symposium of this subject, and the present state of our knowledge may be stated in the following conclusions:

"1. If a palliative trephining has to be done with a view of saving vision, the time to do it is not necessarily on the first development of the neuritis, but the first sign of visual failure manifesting itself (Paton)."

2. In most cases the surgical treatment of optic neuritis arising from cerebral tumors will be limited to the relief of the tension and the temporary preservation of sight."

"3. Tapping the sheath of the optic nerve and lumbar puncture may give temporary relief, but has been discontinued by most operators.

"4. Most authorities now recommend that the operations be performed in two stages, at the first of which only the opening of the skull is made, and any further procedure left for a subsequent occasion (Hay)."

"5. Only about 4 per cent. of cases of brain tumor can be localized, approached, and entirely removed (Frazier)."

6. Site of operation: "In lesions of the cerebellum, operation should be in the occipital region. In lesions of the cerebrum, a choice must be made between the occipital, the parietal, and the temporal regions. The temporal regions, on the whole, is to be preferred, owing to the presence of the temporal aponeurosis, which diminishes the likelihood of a fungus cerebri (Sanger)."

"7. Cushing prefers the temporal region beneath the temporal muscle, the fibres of which are not cut, but separated so as to prevent cerebral hernia."

ANGIONEUROTIC OEDEMA, WITH REPORT OF TWO INTERESTING CASES.

RICHARD A. BOLT, M. D.,
Cleveland.

[Read before Ohio State Medical Association.]

A sufficient number of cases of so-called angioneurotic œdema have been described to remove it from the class of diagnostic novelties. The literature is replete with reports of this striking affection. Every essential clinical feature appears to have been brought to light. Although by some authorities classed with the trophoneuroses, by others considered as a distinct angioneurosis, its association with a number of disorders is fully recognized. The exact pathologic substratum, however, is still unsettled. Its relation to the erythemas, to urticaria and the purpuras raises questions quite profitable for discussion. A new group of angioneurotic dermatoses has recently been formed whose inner relations are but little understood.

A few lines will answer to sketch a clinical picture of angioneurotic œdema. Briefly outlined thus:

1. It is characterized by the sudden appearance of more or less circumscribed œdematous swellings of the skin or mucous membranes in divers parts of the body, varying greatly in extent and area. Swellings may appear on any part of the body, the points of election being the eyelids, lips, ears, chin and hands. Œdema of the genitals is not uncommon. Serious cases of œdema of the glottis and pharynx are on record, and a few cases of sloughing of soft palate and uvula have been reported.

2. The circumscribed swellings may be of a pinkish, reddish, pale or waxy, or even of normal skin tint. They do not pit readily on pressure. The lesions usually develop rapidly, appear suddenly in one part, disappear only to reappear in another. In many cases the swellings are quite fleeting, lasting from a few minutes to an hour. In others they persist for many hours. As a rule they depart spontaneously, although a gradual subsidence may take place in a few days without serious sequelæ. The patients usually enjoy good health until the next attack.

3. A feeling of tension, stiffness, itching or burning—if in the pharynx, dryness—often accompanies the skin lesions; but rarely a distinct sense of pain.

4. In a certain number of cases a tendency to periodic recurrence is evident. Sometimes this occurs as often as every two or three weeks

sometimes not for many months, and in a few cases not for years. Periodic attacks of cardialgia have been noted in connection with recurrence of the swellings.

5. An urticarial eruption may precede or accompany an attack. The attack is frequently ushered in with acute gastro-intestinal symptoms—nausea, vomiting, diarrhoea and giddiness. A few cases have exhibited marked albuminuria and paroxysmal hæmoglobinuria. In the course of an arthritis, with purpuric eruption, acute circumscribed oedematous swellings may occur.

6. Both sexes are about equally affected, although in this country women seem to predominate. It develops at all ages. In a few cases, infants shortly after birth exhibited localized oedematous swellings which persisted, however, for a longer time than has been noted in acute cases in adults. In the aged swellings also occur, but the age of predilection is between 25 and 35 years.

The following case well illustrates a number of the clinical features:

Case I. A single woman, 42 years of age, milliner by trade, was first seen about 11 o'clock on the night of October 21, 1908. When she appeared at my door she presented a striking appearance. Her eyelids were greatly swollen, the conjunctivæ moderately congested. The upper lip was puffed out and quite tense. The woman held a hand to her neck, and gasped that there was a tight lump in her throat. The throat felt very dry. She could scarcely swallow or draw a deep breath. The lips were slightly cyanosed. She became quite apprehensive, and complained again and again of a feeling of constriction about the throat. The fingers, which she said felt numb, had become slightly swollen since the attack began.

When sufficiently quieted the patient gave the following interesting history: Lately she had been working very hard at her trade, sometimes working far into the night. A few days previously she had buried her mother who had been sick for many months with a nervous disorder. Earlier in the evening the patient had eaten a hearty meal. For a month or more she had a rather severe cough, and lately catchy pains in the loins, which she interpreted as lumbago. On the evening she came to my office a local druggist had supplied her with some Omega oil and half a dozen 5 gr. Aspirin tablets. She took one of the tablets in the drug store. Half an hour after the tablet was taken, without any warning her eyelids began to swell; a dryness was felt in the throat, followed by a feeling as though a lump were rising, and then a sense of constrict-

tion. The upper lip began to swell; the fingers felt numb and swollen.

S. P. Temp. 98. Pulse 80, full volume and moderately high tension. Respiration hurried and labored for awhile. Lips slightly cyanosed. Appearance apprehensive. Both eyelids considerably swollen, the conjunctivæ injected, the eyes watery. Swelling of the upper lip well marked. The swellings rather firm, did not pit perceptibly on pressure, and of normal skin tint. The pharynx reddened, and the post-pharyngeal wall swollen and oedematous. There was an odor of alcohol on the breath, which patient explained as due to a little gin which she drank when the attack was imminent. Fingers slightly swollen. There was a slight left hemifacial paralysis which she claims followed a similar attack a year ago. The previous attack was preceded by a general skin eruption, presumably urticaria. In this attack there was no skin eruption other than the oedematous swellings.

The treatment in this case was very simple. Quieting suggestions, the application of hot cloths to the neck, and hot gargles during the acute stage, followed by active cartharsis, and the administration of Elixir. Ferri, Quinin. et Strych. Phosphat. one dram t. i. d. comprised the treatment.

In half an hour after the patient was first seen the swelling of the eyelids had markedly decreased, and the injection of the conjunctivæ cleared up perceptibly. She still complained of an unpleasant dryness in the throat, but could swallow and breathe easier. In an hour she was fairly comfortable, although very nervous and restless. The next morning the swellings had all disappeared, and she was well enough to go back to work. No other attack has appeared in her up to date, although she has undergone the nervous strain and fright of a midnight fire in a store adjoining her shop.

Later a history of several previous attacks was obtained. A minor attack occurred three years ago, the details of which were not recalled. The attack of a year ago is still fresh in her memory. She said it was preceded by "a breaking out of reddish blotches all over the body." A feeling of constriction came into the throat, and the eyes "seemed to pop out of their sockets." The eyelids were swollen as was also the upper lip. The hands and feet were swollen. The swellings lasted longer in this attack than in the present one, but left the woman with a slight left hemifacial paralysis. She has always been nervous since.

Family History: Tubercular history on both sides. Father's sister had a "tumor" whose ex-

act nature could not be determined. This sister's child also had a "tumor." Mother had a "cancer" on her face a number of years ago, but was cured. Mother had nervous trouble for many years. After 50 years of age she developed a nervous disorder which was diagnosed "St. Vitus dance"—probably a Huntington's chorea. As a result of this disease she died a week before I saw the patient. The mother's sister also developed chorea late in life, and died from its effects. The maternal grandmother also gives a neurotic history.

Previous Medical History: Patient has had rheumatism, and what she calls "typho-pneumonia," with good recoveries. Nervousness for years. From the gynecological records of Charity Hospital, I learn that on Jan. 19, 1900, an abdominal hysterectomy for fibroid uterus was performed by Dr. W. H. Humiston. Up to that time she had complained of sleeplessness, impaired digestion, irregular and excessive menses. She was very weak and anæmic. Had noticed tumor in abdomen for one year. The fibroid reached one inch above umbilicus. After operation she had decided relief from previous symptoms, but gradually became more and more nervous.

From a search through the literature I cull the following:

1. Angioneurotic œdema occurs as a manifestation of neuropathic taint in certain families where the hereditary feature is well marked.

2. It sometimes follows exhausting conditions—prolonged mental and physical labor; fright, anxiety, worry, grief.

3. In some individuals large urticarial wheals follow closely the ingestion of certain foods—shell-fish, strawberries, bananas, apples.

4. Some cases have occurred in close association with sexual disorders at puberty, during menstruation, at the menopause and following excessive venery.

5. One of the most frequent predisposing factors is some gastrointestinal disorder—acute indigestion, dyspepsia nervosa, spastic constipation, etc.

6. It is sometimes excited by toxic agents, as alcohol, tobacco, malaria.

7. Sudden changes of hot and cold in some persons precipitate the attack. The periodic recurrence of the swellings in winter and summer appear to have some connection with the heating and chilling of the body surface. It has also been pointed out in some cases that the swellings appear frequently in the early morning hours when the vascular tension is low.

8. Even some traumatic injuries have been fol-

lowed by swellings closely resembling angioneurotic œdema.

9. The localized blue and white swellings which occur in certain cases of hysteria are quite similar to the lesions of angioneurotic œdema.

10. In a number of case reports the swellings have been accompanied or followed by a marked albuminuria and hemoglobinuria.

11. A few cases have appeared in distinctly gouty individuals.

12. The most striking of the cases, however, are associated with the purpuras, urticaria, erythema exudativum and arthritis. They are found grouped under such misleading names as purpura rheumatica, or Peliosis Rheumatica of Schönlein; Henoch's Purpura; giant urticaria, etc.

The next case I have to report beautifully illustrates the clinical relationship between these disorders.

Case 2. This case I have the privilege of reporting through the courtesy of Dr. John P. Sawyer, on whose service it appeared at Charity Hospital, Cleveland, November 6, 1908. For full notes I am indebted to Dr. Russell Jewett, House Physician at the time.

Dr. B., age 45, physician, single. Entered the hospital complaining of pain and swelling of the joints, fever, malaise, sore throat, reddish eruption over legs and thighs. Family history negative.

Personal History: Ordinary children's diseases with good recoveries. Had diphtheria at 23 years, and a second attack two years later, with good recoveries each time. An attack of inflammatory rheumatism 16 years ago lasting 16 weeks. Has had slight attacks of rheumatism during the winters since, except a few winters spent in the South. Only mild attacks during the last two winters. Patient thinks they were probably modified by regular Turkish baths. Has had attacks of tonsillitis for the last four years preceding his rheumatism. Mild nasal catarrh for years. Respiratory system negative. Heart negative. Genito-urinary system negative. No skin lesions or œdema previous to present illness. Good habits. No loss of weight until present trouble.

Present Illness: Began about three weeks previous to entering the hospital as a slight attack of tonsillitis, followed in a few days by some swelling and pain in the right ankle. This condition became worse, and especially attacked the first joint of the right great toe. It then proceeded up the leg and thigh to the buttocks as a soreness in the muscles. The condition then became general, attacking different joints and muscles. Within three days the patient was confined to bed, and during the next three weeks grew

gradually worse. The joints of the extremities were especially involved. About a week before entering the hospital a fine reddish-brown eruption appeared on the ankles. It did not disappear on pressure. At first it was a fine reddish-brown speckled eruption, but as it extended up the legs and on to the thighs the lesions became larger. Within two days after entering the hospital the purpuric eruption was well marked. From the thighs it extended far up the back, in places becoming confluent and covering considerable area. Here and there over the back vibices appeared. A background of fine reddish petechia was formed in certain regions.

Swelling and pain in the joints persisted. The patient had a variable temperature from 99 to 102 F. The pulse ranged 90-100. At times the pain was excruciating, extreme restlessness set in, and at night delirium developed.

After being in the hospital a week marked swellings suddenly appeared over the patient's arms and various parts of his face. Prominent circumscribed oedematous swellings of eyelids, lower lip, ears, neck and forehead appeared from day to day. The swelling would appear suddenly on one part, disappear rapidly only to reappear on another. The normal skin tint was preserved over the swellings. A feeling of tension and some itching were complained of.

Before admission to the hospital the patient had taken $1\frac{1}{2}$ gr. calomel. This had caused salivation and the passage of small lumps of fecal matter. He had also used gargles of chlorate of potash for sore throat, and the bowels were freely opened with salts. The salicylates were given until the patient showed toxic symptoms. After these effects passed off, Aspirin grs. v every two hours administered until toxic. No benefit seemed to be derived from this medication. Opiates were then given to control pain. In the hospital hot packs and morphine appeared to be the only means of alleviating the suffering.

On November 16 a general stomatitis developed. The circumscribed swellings were still making their appearance. Considerable pain in the joints. The mouth became very sore, and the stomatitis went on to suppuration and sloughs in parts, the soft palate with the uvula being specially involved. The uvula completely sloughed. The breath at this time was very foul. Large ulcers formed on the tonsils and on inner aspect of lips and cheeks. These were curreted and cauterized. From this time on the patient began to improve. The oedematous swellings ceased to appear, the purpuric lesions slowly cleared, and the temperature gradually abated. The patient was

well enough to leave the hospital on December 11, 1908. He spent the winter in Florida. While there he was quite free from previous symptoms, but on his return during the changeable spring weather he noticed soreness in arms and shoulders. The oedematous swellings have not reappeared.

The exact pathology of this disorder is so obscure that I will not weary you with many theories. They can all be boiled down to the statement that it is considered as one of the angioneurotic dermatoses "characterized by a marked disturbance of the vascular tonus, in addition to a more or less pronounced inflammatory condition of the skin." There may be a marked dilatation of the vessels, with possible increased permeability of the walls, and rapid exudation of serum.

My study of this peculiar affection suggests some pertinent questions:

1. Can we still regard angioneurotic oedema as a pathologic entity while its clinical affinities are so diverse?
2. While retaining as convenient its text-book classification with the trophoneuroses, or angioneuroses, is it not more reasonable to regard it as simply a symptom, or sign, which may manifest itself in a large number of pathologic states?
3. While the disorder is usually engrafted upon an individual whose nervous system is below par, is it not reasonable, on account of its frequent gastro-intestinal symptoms, and renal disturbance, to regard it as some sort of intoxication?

In infants, sudden, severe colic associated with diarrhoea or the passage of small quantities of blood, should lead one strongly to suspect intussusception.

When a patient gives all the signs and symptoms of appendicitis, if the stools have been noticeably black, a duodenal ulcer should be kept in mind.

A perforated intestinal ulcer, especially if low down, may simulate acute appendicitis. A very high leucocyte count with a high percentage of polynuclears, and the presence of a large amount of fluid in the peritoneal cavity, accompanied by general rigidity, may suggest the diagnosis.

A palpable tumor in the umbilical region is often a malignant growth of the transverse colon. Benign growths of the mesentery are also found here.

HUNTINGTON'S CHOREA.

F. W. LANGDON, M. D.,
Cincinnati.

Huntington's Chorea is also known as chronic progressive hereditary chorea; family chorea; choreic dementia, and locally (southeastern New York State) as "the Magrums," a Dutch term equivalent to our "fidgets." It might, with some propriety he termed an "American" disease," as that term is applied to neurasthenia; since the original cases were observed on Long Island, N. Y., and described by an American physician, George Huntington, in the Medical and Surgical Reporter, Philadelphia, April 13, 1872.

Dr. Huntington is still in active practice at Hopewell Junction, Dutchess County, N. Y. Like many other distinguished citizens, he was at one time an Ohio man, having practiced at Pomeroy, Ohio, in 1871 and later, where he married Miss Elizabeth Hackard.

While of extremely local habitat—in America the original cases observed were geographically limited to Long Island, southeastern New York State, and adjoining portions of Connecticut—the disease has since been found to have a world-wide distribution, cases having been reported from every country in Europe (excepting Sweden, Norway, and Turkey) and also from Canada, the West Indies and South America. It has been observed in the negro as well as in white races.¹

The disease is easily recognized. Its characteristic features are three in number. First, heredity, the disease having been traced by various observers through several generations. It has been stated that when the disease skips an individual of any affected family—the disease fails to reappear in his descendants.

Secondly, the onset during adult life of choreiform movements; usually between the thirtieth and fortieth years. These movements, according to the present writer's observation, are larger in range and slower in time (less "jerky") than those of the chorea of Sydenham. Speech is slow, indistinct and not "explosive" as in ordinary chorea.

Thirdly, dementia, beginning in a few years after the onset, and gradually progressing to complete abolition of intellect. Cases are reported where the dementia feature is overshadowed by elated, delusional and suicidal tenden-

cies for variable intervals. Eventually, however, complete mental extinction is the rule.

Life may be prolonged for ten to thirty years after the onset, and its termination is usually due to some intercurrent malady or to exhaustion.

Pathology. Evidences of chronic inflammatory changes are found in the cortex, but whether these are causal or consequential to the disease is not apparent.

Oppenheim and Hoppe² found "disseminated miliary encephalitic foci" in the cortex of the motor region.

Collins³ found (1) thinning and atrophy of the cortex, diminution in number and shrinkage of ganglion cells. Slowly progressive degeneration of the cortical neurons throughout the cortex, especially of the two deeper layers, (the large pyramidal and polymorphous neurons). Increase of neuroglia tissue. All these changes were more manifest in the Rolandic region; consequently degeneration of the pyramidal tracts in the cord was also traceable.

There are three sufficient reasons for reporting a case of a rare or uncommon disease. First, that we may attract attention to its distribution and possibly add to our knowledge of its causes and of the indications for prophylaxis or curative measures.

Secondly, because its rarity may be only apparent—due to the fact that cases are not diagnosed.

Thirdly, in a disease of this character—that we may be on our guard against a too favorable prognosis since its earlier symptoms may be so mild as to mislead us as to its ultimate gravity and hopelessness.

Case report: H. R., a white man, forty-three years of age, was admitted to the Neurological Service of the Cincinnati Hospital, Nov. 19, 1908.

He was born on a farm in Indiana and did the ordinary work of a farm hand up to his thirty-eighth year, when he went to a manufacturing city and obtained employment as a laborer about some machine shops. After five months he began to be awkward with his hands, so that he "dropped things" and was generally inefficient at his work. After taking two months rest and treatment in a hospital, during which time he states he was improved, he returned to work, but was soon compelled to quit on account of an increase in the jerky movements and awkwardness in using his hands.

Family history is very meagre, on account of

¹Those desirous of following the subject in detail—will find the fullest account extant in "Neurographs," Vol. 1, No. 2, May, 1908,—Brooklyn, N. Y., where also is to be found a complete Bibliography of the disease, by Dr. William Browning.

²Arch. fur Psychiatrie, Berlin, 1893, XXV, 617-636.

³Collins, Jour. Nerv. and Ment. Dis., 1898, 59-60.

mental deficiency of the patient. He states, however, that his paternal grandfather was born in New York State (Genesee County) and emigrated to Indiana, where he died at the age of 98.

His father was born in Indiana. Neither parent is living, but age at death is unknown. He has brothers and sisters said to be well. He knows of no other case of similar disease in his family—which is not surprising, since he has very little knowledge of any kind concerning it; probably due in part at least to the evident dementia present. He states that he had no chorea or similar disease in childhood.

The hereditary element, therefore, cannot be traced and the case is incomplete as regards that feature.

Examination shows him to be a man of medium height, only fairly developed, general nutrition fair. No obvious deformity or paralysis. Vegetative functions normally performed.

Speech is slow, guttural and indistinct. Mental defect is evident in his indifferent attention, lack of spontaneous interest, childish remarks and irrelevant replies to questions. He has a fair memory for ordinary events and can do simple problems in arithmetic—such as subtracting four from sixteen correctly. When asked to subtract six from seventy-six, he said, "Twelve, I guess." The same answer he gave to the previous question.

He sleeps well; states that he does not dream.

Movements: Irregular, purposeless movements are evident of both upper and lower facial regions, of hands, forearms, feet and legs.

These do not disable him for adjusting his clothing, feeding himself, etc., but are more evident on attempts to use the limbs in any way.

His gait is somewhat suggestive of that of a drunken man. In fact, he was picked up on the street by a policeman, for that reason, and brought to the hospital, where he was discovered to be sober.

The movements of face and upper extremities impress one as larger in excursion, slower in rate and on the whole less "jerky" than the similar movements of ordinary chorea.

The onset at or about his thirty-eighth year and the evidently progressive dementia supervening soon after appear to warrant a diagnosis "by exclusion" even in the absence of the hereditary history.

Treatment has not been of any avail in arresting the cause of this disease. The patient here recorded remained under observation for a few weeks only and left the hospital voluntarily. So far as I am aware, this is the first case recorded from Ohio, though cases are on record for Illi-

nois, Missouri and Minnesota, in addition to the extensive range of distribution previously referred to.

DISCUSSION.

E. C. Brown, Massillon: I am rather interested in the paper read by Dr. Langdon for the reason that it is as he has stated, a very rare condition, and no cases, seemingly, have been previously reported in the state of Ohio; and again, because I have run across three cases of this disease while serving as assistant physician in the State Hospital at Massillon, O. We have at present two cases living with us in the institution. The third case, and the case for which we have more complete data, died several years ago.

This latter case is especially interesting because of the tracing of the disease in the ancestry. We have traced it back to four generations. Three of those generations were found to live over the territory embraced by the state of Ohio, to my knowledge. One of the relatives affected was a sister, and another, I believe, an uncle. The doctor has reported cases of chorea in the male. I would like to state that two of the cases that have come under my observation have been in females, and the third in male. In the case that died, the mental depression was quite marked. This is the case in which, as I stated, we have more complete data of history.

The dementia was very pronounced, which condition is also very noticeable in the two cases we have living at the institution at the present time.

We had not the permission for a post-mortem examination of the case, although every effort was made to obtain consent to an autopsy. We desired to study the pathological conditions, in the hope of finding valuable information concerning this rare disease.

I am sorry to state that my knowledge of the cases we have with us at present is not such as would add anything to that which has been furnished by Dr. Langdon, though one of the cases is a case with which some of the Columbus Hospital physicians are very well acquainted—a Mrs. L., recently transferred from the Columbus State Hospital—and I would ask to hear from Dr. Williams.

G. H. Williams, Columbus: We have or have had during the past five years, at least five cases of Huntington's Chorea in the State Hospital of Columbus. Of the cases three had definite hereditary histories. I have a short history of two of the cases, a brother and a sister. The great-great-grandfather of the two patients came from New York State 100 years ago. While the man was moving overland from New York to Ohio the people along the way were very much afraid of him. On account of his peculiar choreic movements, they thought him possessed of the devil. He had twelve children. One of these, a great-grandfather of the patients, had nine children. Of these one died choreic, and another one who was choreic wandered away in the woods and died of exposure. The grandfather had eight children and died at the age of 34. The mother of the patients states that the grandfather never had chorea, but the male case states that the grandfather was very, very nervous. The fact that the grandfather died at the age of 34 might

indicate that he had died before the chorea had become manifest. As before stated, he had eight children. One of these was a patient in the Columbus State Hospital, in the year 1888, but only lived three or four months after his admission. Another one of his children has a child whom they think is developing chorea. The father died at the age of 56 of erysipelas. The present generation consists of one girl who is of very nervous temperament. She has had ten children, seven living and three dead. One of the living children, a male, aged 49, has chorea which began at the age of 40.

A. F. Shepard, Dayton: - have found the disease not so very rare around hospitals for the insane. I can now recall having seen four or five cases in the last fifteen years. One typical case is in the State Hospital now. We had another man there last summer who was a typical case and I remember one day his brother came to visit him and his movements were about as bad, although he was not a patient at any hospital. He did not show much mental deterioration, however.

PRURITUS ANI, WITH SPECIAL REFERENCE TO ITS TREATMENT WITH THE RÖENTGEN RAYS.*

W. I. LE FEVRE, M. D.,
Cleveland.

[Read before the Ohio State Medical Association.]

It has been a time honored custom among all societies that the chairman in his annual address should be a privileged character. He may choose a subject in keeping or otherwise, take his time about telling it, in fact, act like the society was a trust and he owned most of the stock. However, I notice in the heading of our official program in *THE JOURNAL* it states that papers shall be limited to twenty minutes in time, except those of the chairman and guests of the sections. Now, from that I take it that *their* papers must consume *less* than the allotted time, hence it will give me pleasure (in fact all of us great pleasure) to see that the instructions are carefully fulfilled.

With this ordeal staring me in the face, several months ago I began casting my mind's eye about that perchance it might fall upon some suitable theme worthy of this occasion. The happy thought occurred that in the title of this paper was a subject especially interesting to the proctologist, perhaps equally so to the dermatologist and one even the genito urinary surgeon meets with as well. Then also it is a subject rather dear to my heart, as I have had the pleasure of seeing a number of cases and rather considered

it a topic worthy of the steel of any pen. This bit of egotism, though, received a blow the other day when glancing through a journal I read the following:

PRURITUS ANI.

This is one of the simplest of matters, and the easiest managed in the whole range of clinical work. Forget everything that you have previously read on the subject, and simply imprint this on your mentality: Pruritus ani is *always* due to irritation of the affected parts by the decomposing toxins from retained fecal matter. The remedy is to thoroughly clear out the colon. Disinfect with sulphocarbolates, and, if you want a quickly-acting local remedy, apply Campho-Menthol solution. It is a local anesthetic and quickly stops the pruritus. Besides this, it heals fissures and scratches, and puts the skin and mucous membrane in good condition to resist the subsequent irritation. Then if you need a first-class ointment to give complete relief and promote healing of any eroded surfaces, try Hybisco. It works beautifully in these cases.

This we will dispose of by adding a few grains of NaCl and shake well before taking.

Pruritis ani is a disease that comes self-diagnosed. Usually the victim tells us he has "itching piles." If he would reverse the term he would strike very near the truth. He is always sure of the itching, and upon examination we may find a condition the kind and cause of which is only exceeded by the number of remedies which have been suggested for its eradication. A correct diagnosis and prognosis can only be made after a painstaking examination. If a definite cause can be found the treatment is much simplified. As hinted, though, the cause for such conditions have been contributed to most every internal disorder, to every local disorder and to errors in diet, drink and habits as well. The cure of any given case naturally depends on the condition of that case in particular and in this brief paper it is not my desire nor intention to consider it in all its phases, but rather to substantiate what has been found by a number of observers as to the cause of the majority of cases and to give my treatment for those cases that I am pleased to call "true pruritus."

The opinion is fast gaining ground that most of these cases are caused by a persistent irritating discharge from the rectum. It is easy to conceive how any disease of these parts causing an increase in mucus secretion could be the prime factor in the etiology. In the majority of cases an ulceration of the mucous membrane can be found, between the internal and external sphincter muscles and usually on the median line, posteriorly or anteriorly. It is easy to overlook this ulcer, too, unless one has the proper appliances, for it is often very small and shallow. Not sufficient to

* Chairman's address before the Proctological, Dermatological and Genito-urinary Section of the Ohio State Medical Association.

give any pain in itself, the patient being entirely unaware of its presence. If found your prognosis can be good and with the co-operation of the patient a cure can be expected. In old cases of long standing we frequently find a severe pruritus, with the typical white parchment skin, indurated, lying in folds, with cracks radiating out like the spokes in a wheel. The surrounding skin eczematous and excoriated from scratching. Ofttimes in these cases no exciting cause can be found for the disease may persist for years after the original cause has disappeared. In these cases the terminal nerve filaments are affected so that before a cure can be perfected, a new skin must replace the old. This has been done surgically, destroying with acids or the cautery, or by the newer and to my mind the best method, the use of the Roentgen ray. My technic in these cases follows:

Treatment.—If possible treatments are given twice a week in the office. The sphincter muscles are gradually dilated, using the Wales bougies, beginning with a No. 5 or 6 and gradually increasing to a No. 12. The rectum is irrigated with a boracic acid solution, a tablespoonful to the quart of warm water. If an ulcer is found between the sphincters it is painted with pure balsam of peru. The X-ray is applied to the skin, using a medium soft tube, surrounded with a Wagner composition rubber shield, placed about six inches from the part, the patient holding the buttocks apart as he lies on his side, with his hand, all parts being covered with a lead shield, with a hole in same which allows the light to fall only upon the diseased area. The treatments are given for from three to five minutes, watching the skin for signs of reaction, and as soon as a erythema is produced the treatments are stopped. This usually takes from six to twelve in number. During the treatment the patient is instructed to bath the parts with hot water and apply the following anti-pruritic salve morning and night:

R Resorcin gr. 10
Menthol gr. 5
Adeps benz. Lanolin.....ãã oz. ½
Aqua f. dr. 1
M.

In this prescription do not forget the water. The results have been very satisfactory in the majority of cases and a cure can be anticipated in from three to six weeks.

SUMMARY.

Pruritus ani is a disease occurring usually in fleshy adults, owing to the increased heat and moisture of the parts in this type of individual.

The direct cause is usually an irritating discharge from the rectum, caused from an ulcer of

the mucous membrane, situated between the external and internal sphincter muscles. The essential treatment is (a) dilation of the sphincters, (b) irrigation of the rectum, (c) Roentgen ray application to the affected skin.

218 Lennox Bldg.

DISCUSSION.

M. L. Heidingsfeld, Cincinnati: I do not think this paper should pass without discussion. It is a subject of great practical interest and I would like to briefly state my personal experience, which corresponds closely with that of Dr. LaFevre.

The X-ray has been of great service in the treatment of obstinate cases. I use it as a routine procedure in almost every case, no matter how slight or how long the duration. However, in a very few extreme and intractable cases, in order to meet the full requirements, I have been obliged in one or two cases to go to greater extremes than that presented in the paper.

Very often you will find corrugated folds and tags of skin around the anus, the result of old hemorrhoids which have disappeared. Some of these cases go from doctor to doctor, and while the removal of the tags affords relief, it is usually of temporary character. In some of these cases I have been obliged to excise all the diseased tissue by means of semilunar flaps. The removal of the rough, excoriated, corrugated tissue and the section of the cutaneous nerves is essential, because the itching is due not only to the thickened character of the skin, but also to the changed character of the cutaneous nerve filaments from prolonged irritation and inflammation. A very gratifying and satisfactory result has been often attained by this method, in cases exceedingly refractory to other methods of treatment.

I agree fully with what the doctor has said concerning tar. Tar is probably one of the most efficient remedies we possess to allay itching; in its ordinary forms it is often irritating, but when mixed with soap bark tincture, in the form of liquor carbonis detergens, it is one of the most effective agents for the successful treatment of pruritus ani. It allays itching better than anything, to my personal knowledge. The doctor mentioned that he adds water to his ointments. Many ointments are irritating because they absorb too much moisture from the skin, but by adding a little lime water they are rendered tolerable to the skin, and more efficacious in character.

The X-ray is of great value, particularly in chronic, persistent cases characterized by thickened and infiltrated skin.

U. S. Grant Deaton, Toledo: I would like to ask a question. We have this here (illustrating), representing the anus; this is the thickened skin; if you made your flaps here, what are you going to do with this tissue immediately surrounding the anus?

Dr. Heidingsfeld: The margin of the anus is coated with the skin on either side.

Dr. Deaton: What of this tissue in here, between the flaps?

Dr. Heidingsfeld: Undermine, if necessary, the cutaneous border so that it can be readily drawn to the anal border.

Dr. Deaton: What of this tissue right here?

Dr. Heidingsfeld: The skin anterior and posterior to the anus is not disturbed, particularly if it is not the pathological tissue. The operation is not difficult and can be easily carried out. I make an incision around the anus close to the healthy mucous membrane; I carefully dissect away a semilunar area of thickened, infiltrated skin laterally on each side, and suture the free edges together.

U. S. Grant Deaton, Toledo: My experience is that in doing this operation—suppose we let this space in here represent the external sphincter (illustrating), this the upper margin of it, and this the internal sphincter. I have found that this skin becomes very thick, almost pachydermoid, and as long as any of that remains the disease is not cured and the patient will still have the itching.

Now, my experience in operating upon this trouble is to remove this skin, an inch or two at a time. After this is healed, sufficient time must be allowed for this new skin to take on its former normal condition, that is, take on its normal elasticity. The other side can then be removed, and in that way you will not have stricture. If both sides are removed at once you will have stricture, unless you dissect this out and down a distance in here between the internal and external sphincters, and remove the tissue in here, otherwise there will be stricture unless you dilate, and dilation is very painful unless you put your patient under anesthesia, and not many patients will submit to it.

After a period of a couple of months are permitted between the two operations, this will take on its former elasticity, and when this is removed and healed, the disease is cured without stricture.

Now as to ointments, I have used many different kinds of applications. I have used pure carbolic acid, applied it and reapplied it, and in most cases, I presume, if the patient would allow you to keep it up long enough, it would do all that is expected. The same is true of nitric acid, but I cannot find any patients who will permit it, so that surgical means, as I have demonstrated, are the only means I have found that will actually cure it and not leave bad results.

M. L. Heidingsfeld, Cincinnati: I cannot see any object in making two operations out of a procedure that can be done in one. Stricture should be entirely out of the question. I have never seen it in any operated case, and can see no basis for same. Removal of normal skin never causes stricture; it is almost invariably the result of scar tissue, and scar tissue only follows prolonged suppurations and inflammations. I speak only from experience, and I have never seen any stricture and cannot see any pathological basis for same.

THE DIFFERENTIAL CUTANEOUS TUBERCULIN REACTIONS IN THE DIAGNOSIS AND TREATMENT OF TUBERCULOUS LESIONS BY METHODS OF PROF. C. VON PIRQUET AND D. L. DETRE.

A. MELVILLE CRANE, M. D.,
Marion.

[Read before the Ohio State Medical Association.]

I deem it unnecessary to review the discovery of the bacillus of tuberculosis of Koch, nor is it necessary for me to review all the efforts of the great scientist, in his efforts to find a cure for pulmonary tuberculosis. It was while pursuing this line of observation, however, that he discovered that the injection of tuberculin caused certain systemic reactions, governed by the size of the dose, and the character and degree of the tubercular infection; these were not alone general, but certain local phenomena were noted at the site of the injection; this he termed the "stichreaction." It must be said that the method of Koch was not free from dangers, being, at times, accompanied by severe general symptoms, as fever, chills, sweats, aching and pain, and even graver dangers; for instance, a lighting up old and healed or latent lesions, or stimulating light recent infections into graver forms. Numerous investigators were led to study this "stichreaction" in the hope of finding a method which would serve to diagnose the character and kind of infection, and yet free from the above mentioned dangers.

It is to Prof. Calmette of Lille, France, to whom we are indebted for the "ophthalmo-reaction to tuberculin;" to Moro, for the skin-reaction by the application to the skin by the friction method, and last but not least to Prof. von Pirquet, formerly of Vienna, who has succeeded in giving us a safe and reliable method, which bears his name. Detre of Budapest developed the method by use of different tuberculins, which enables us to determine positively whether the infection is of the *typus humanus*, or of the *typus bovinus*, and it is to labors of Profs. von Pirquet and Detre that I will devote this paper.

The use of tuberculins of Koch (T. O. and other forms), administered by the subcutaneous method for the constitutional reaction, showed a local manifestation at the site of the injection, which became quite characteristic of the type of the infection, and sometimes became very marked even to decided inflammation and suppuration. It was Prof. von Pirquet who first

or was among the first, to observe and carefully study these eruptive phases of the reaction with the purpose in view of interpreting their action, and he determined that only those individuals who had previously been infected with tuberculosis showed within twenty-four hours a local inflammation. From these observations he developed his test, which is as follows. The skin of the forearm is scrubbed with ether, two drops of Koch's old tuberculin are dropped about four inches distant from each other, then with a vaccinating lancet, the point of which is shaped like a small chisel, a superficial circular scarification is made between the two drops (for the control of the inflammatory or traumatic redness following the scarification), and similar scarification is made inside each of the two drops of tuberculin; a few fibers of cotton are put on the drops so they will not flow. After five minutes the cotton is taken off. No dressing is applied. The test is considered positive when the tuberculin scarifications are different from the control scarifications, but the inflammatory reactive area must be at least five mm. in diameter. The interpretation of the reaction will be considered later in this paper.

It was after the publication of his cutaneous reaction that Wolf-Eisner and Calmette applied to the conjunctiva dilute tuberculins, and Moro applied them to the skin by friction. The Moro and Calmette methods are foreign to this paper, and will not be referred to again except to say that they are inferior to the cutaneous method, and the ocular method should not be employed, as it is not free from danger, having been followed by very unpleasant and disastrous results.

At the International Tuberculosis Congress at Washington last fall, Ladislaus Detré of Budapest read a most interesting and the most important publication as yet published on this subject, under the title, "The Use of Differential Cutaneous-Reactions in the Diagnosis, Pathology and Treatment of Tuberculosis." The Detré method is a modification of the von Pirquet method and is administered as follows: The arm is cleansed and rendered free from all chemicals and antiseptics used in cleaning process, after which he applies the tuberculin at three points about five or six cm. distant, at (a) the proximal, he places one large drop of Koch's T. O.; at (b) one drop of B. F. Deny's filtrate culture of human tubercle bacilli; and at (c) a drop of the bovine filtrate culture; he allows them to remain a few moments only, and then through the center of each, with a conical pointed instrument with a shoulder to prevent too deep penetration, and a drilling motion, he

perforates the skin through the center of each drop of tuberculin just deep enough to avoid drawing blood, the instrument being round, does not cut the skin, and it does not bleed. After waiting perhaps ten minutes, he wipes off each area with a separate piece of cotton. At the end of twenty-four hours the inoculation points should be examined to determine the positive or negative result of the test. If positive, we will find at this time at least an irritation with some local infiltration and slight induration (a papule), surrounded by erythematous areola, shading off into the healthy tissues; if very active, there may appear some vesication. The point reacting establishes the "dominant" type; should the bovine type prevail, the others, that is, the T. O. and B. F., will remain inactive except the traumatic reaction.

In the von Pirquet method, the reaction is practically the same, except that it must be remembered that he uses only the old T. O., in adults full strength, and in children dilutions to as low as 10 per cent, according to the age. He also uses but two points, one for the point of control, which exhibits only the inflammatory reaction, provided care has been observed to prevent it from any tuberculin contamination.

Prof. von Pirquet tested for some time all the children who entered the clinic to which he was attached, viz., that of Prof. Escherisch of Vienna, except those who were suffering from measles (in which cases the reaction is always negative). The number examined was 1407, ranging from birth to 14 years of age. He divides these into two tables:

TABLE No. 1.	
Number of all cases.....	1407
Reaction, positive	539
Manifestly tubercular, reacting.....	189
Manifestly tubercular, non-reacting (miliary T. B.).....	20
	— 748
Total number non-tubercular.....	659

TABLE No. 2.	
Of the 1407, there were 273 clinically tubercular which were eliminated from the test, leaving a balance of 1134 clinically non-tubercular.	
(a) All cases, minus all surely tubercular.	1134
(b) Frequently examined, negative, also on autopsy T. B. free.....	338
(c) Primary positive (but clinically unsuspected)	128
(d) Torpid or secondary reaction....	128
	—
Total number reacting.....	594
Number clinically tubercular and ex- cluded	273— 273
Number of non-reacting.....	540
Number inoculated	1134
	—
Total number under observation....	1407 1407

Of the 1407 cases vaccinated by Prof. von Pirquet, 200 died and were carefully dissected, with the following results: Sixty-five were found to be positively tubercular, 66 showed microscopical tubercles, and in only two were the results of dissection uncertain, and in one of these was found a pleuritic adhesion to the pericardium.

Negative results were found in the following: (1) in all (109) of negative cases; (2) in several cases of fatal tuberculosis, particularly in older children, when test was made only a few days prior to death; (3) in cases when the test was made during the illness of measles; and (4) in some cases in which none of the above causes could be given. He further says: "It especially occurred, as has been stated by others' experiences, in cases where tuberculosis was slight and seemed inactive; often by second testing or by the injection of tuberculin.

In commenting on Table 2, he says: "In cases presenting clinical evidences of tuberculosis the reaction is positive in most all cases after twenty-four hours, whereas in latent tuberculosis, especially in older children, we see that only about one-half of patients react only after some days" (this he terms a "torpid reaction"), "and some react only to a second test" ("secondary reaction").

Relative to the significance of the two last named, it is suggested that they generally indicate a slight old tubercular focus or infection which is in the process of healing. Prof. von Pirquet states in support of this, that, first, at autopsies secondary or torpid reactions were found to have been produced by slight or old tubercles; second, fresh and clinically manifest tuberculosis does not show these forms of reaction; third, the increase of these secondary reactions from year to year corresponds in percentage to that established by Prof. Hamberger for the frequency of healed tubercles found at autopsy in children who died from other causes; and fourth, we have a similar phenomenon in the development of the local lesions in revaccination with cowpox in cases in which a long time has elapsed after the primary or previous vaccination. Furthermore, the reactivity to tuberculin appears some weeks after the infection has occurred, and then increases in degree after some months to a considerable height. If the tuberculosis is overcome by the individual and is healed, the reactivity slowly decreases in the following years below the level of the cutaneous activity. We know from the studies from the various antibodies that, in an organism which has once formed antibodies and has lost them,

a slight reinfection or second injection with the same poison, a new and strong formation of antibodies, occurs. In a similar fashion, if a person with a latent or healed tuberculosis is again infected with tubercle bacilli, or if he absorbs a minimum amount of tuberculous poison (by means, for instance, of a cutaneous tuberculin test) he again forms antibodies and shows some days or a week later a high reactivity. A high reactivity does not show or prove the existence of an active tuberculous process in the sense that the tuberculosis is progressive. It only proves the organism has recently come in contact with tubercle bacilli or their poisons. Therefore, we can conclude that in older children the presence of a tuberculin reactivity may be compatible with apparently perfect health. In comparing his statistics with those of other critics, he says: "The percentage of infected (reacting) children is a particularly high one in my table. In other cities it will hardly be as high, because tuberculosis is particularly prevalent in Vienna. Furthermore, all my patients belong to the poorer classes. My statistics lose to some degree their general value; for our children are infected in somewhat earlier age on account of the prevalence of tuberculosis among their parents. It will be necessary to make similar studies in other cities to make or ascertain the frequency of tuberculosis in general."

He claims for his method the advantage over the injection of tuberculin that it does not produce any general symptoms. It has the advantage over the subcutaneous reaction of producing an entirely harmless inflammatory efflorescence on the skin, and over the percutaneous application of tuberculin, in that it can be carried out more quickly and more uniformly. It is, however, not as sensitive as the "stichreaction" and does not produce inflammatory phenomena of the tuberculous foci, which, after Koch's injection, can be utilized diagnostically.

Confirmatory to the statistics given by Prof. von Pirquet, we may refer to and quote from a paper read by Dr. Henry Heiman of New York City, before the International Congress for Tuberculosis, held at Washington, D. C., last fall, which is as follows: "Fifty-seven children were vaccinated according to the von Pirquet method at the Mt. Sinai Hospital in the Children's Service of Dr. Koplic and myself; 20 showed a positive and 37 a negative reaction. The twenty children that gave a positive reaction suffered from the following morbid conditions: Tuberculous adenitis, 3 cases; tuberculous meningitis, 2; tuberculosis (probable), 2;

pleurisy with effusion, 4; broncho-pneumonia, 1; glioma of retina and multiple dactylitis, 1; amaurotic family idiocy, 1; rickets, 1; intestinal intoxication, 1; sarcoma of the kidney, 1. The thirty-seven negative cases include the following diseases: Congenital amblyopia, 1; chronic arthritis, 1; syphilitic arthritis, 2; intestinal autointoxication, 1; chronic bronchitis, 3; broncho-pneumonia, 3; enterocolitis, 2; empyema, 3; pulmonary gangrene, 1; amaurotic family idiocy, 1; congenital-idiocy, 1; marasmus, 1, tuberculous meningitis, 8; acute nephritis, 1; pleurisy with effusion, 1; dry pleurisy, 1; lobar pneumonia, 1; pseudo-leukemia (Von Jaksch), 1; pyelitis, 1; syphilis, 1; cerebral tumor, 1; typhoid, 1. Special attention is to be drawn to the cases of tuberculous meningitis. Eighty per cent (eight out of ten) gave negative reaction. This probably is due to the fact that the vaccination is performed during the terminal stage, of the disease when the absence of antibodies or bacteriolysins prevented the occurrence of a positive reaction.

To demonstrate that his triple inoculation would differentiate the form of infection, von Detré, in one of the large Washington hospitals, inoculated a large number of children, and described and interpreted the reactions. He discussed the subject before the Congress exhaustively in the following manner:

1. Method of inoculation.

2. Division of cases into (a) those which are sensitive to the (positive) toxin, and those which are not (negative); (b) into cases positive to human, and those positive to bovine, tuberculin.

3. Positive individuals are found chiefly among early cases; also cases with good reaction; and quite frequently in old surgical cases. The older the cases the more rapidly the reaction to the toxin (filtrate) disappears.

4. When the test is repeated at short intervals, the cutaneous picture obtained is constant; very feeble reaction is rendered more distinct by repetition. Modifications of the cutaneous picture occur; thus a marked reaction, characterized by large papules, may be replaced by a milder eruption; or the reaction may gradually increase from zero to a degree of considerable intensity.

5. In adults a primary marked reaction may be diminished by various factors: (a) spontaneous cure or arrest of the process; (b) a sudden flooding of the organism with tuberculous products (miliary tuberculosis); (c) by the establishment of immunity.

6. A primary feeble or rudimentary cutaneous reaction may be intensified by: (a) sudden appearance of a previous latent infection, as catching cold; physical and psycho-traumatism, overwork, influenza, or pneumonic infection, etc.; (b) the reaction may be intensified during the course of the disease, when the immunization treatment is employed with proper dosage and tolerance, instead of immunity, results. Cases of this kind develop the familiar picture of tuberculin reaction; a local reaction at the site of a faulty injection, symptoms of general intolerance, particularly symptoms of intoxication, such as malaise, emaciation, loss of appetite, pulse more frequent, insomnia, headache, anemia, etc.; and the reappearance of the toxin papule after it had long disappeared.

7. The cutaneous picture is an indicator of the sensitiveness of the organism.

8. With the author's method, tuberculous subjects may be divided into two groups: those which are positive to human and those which react to bovine toxin. For this purpose the filtrate cultures are recommended rather than the tuberculins. The author distinguishes the "dominant" papule, which is observed in chronic cases with feeble reaction, and particularly in initial positive cases; and the "concomitant" papule. The difference between the two, however, is sometimes very slight.

9. Investigations carried on since May, 1907, with reference to human-bovine question show that: (a) the cutaneous picture remains qualitatively the same after repeated examinations; that is to say, a "human case" does not later show the picture of the bovine reaction. (b) When both toxins are injected subcutaneously, the subjects show a greater tolerance for the toxin which corresponds to a slight or negative papule formation; while, on the other hand, they are exceedingly intolerant to the dominant filtrate. On simultaneous injection of both filtrate the dominant filtrate may produce a local reaction with infiltration and redness, even when the dose is one hundred thousand times smaller (1-100,000,000 cg.); whereas the other filtrate must be given in considerable quantities to produce a toxic effect. When the injections are made at different times, the organism can be immunized to the dominant filtrate only with the greatest difficulty, as the filtrate rapidly produces symptoms of intolerance (anaphylaxis). The organism is intolerant to dominant filtrate. (c) The blood serum in cases of positive to human tuberculin, contains precipitins for the proteids of the human bacillus (Bonnome's

method), but is very inactive against the bovine proteids. In the bovine positive cases, the opposite is observed.

10. The author's investigations, confirmed by Berend, and Heim, John, and Von Gebhardt, show that more than 90 per cent of all cases of pulmonary tuberculosis exhibit a preponderance of the human reaction; whereas in visceral and surgical cases (in adults) the bovine reaction may be demonstrated in one-third to one-half of the cases.

11. The reaction to human or bovine toxin should be determined under the following conditions: (a) To confirm a difficult diagnosis and answer certain hygienic questions in regard to infection carriers and the mode of infection (inhalation or ingestion). (b) In the study of the question of the dualism of the tubercle bacillus. Cattle react much more vigorously to bovine than to human filtrates. (c) To answer the question in regard to the origin or type of the bacillus or tuberculins (or filtrates), which can be done within twenty-four or forty-eight hours by selecting the test individual according to his reaction to human or bovine tuberculin. (d) When it is desired to immunize a patient for therapeutic purposes, to the toxins of both types. Most tuberculous individuals can readily be immunized with the concomitant toxin, and are intolerant to the dominant filtrate; hence the therapist will select the substance to be employed by the cutaneous picture, and thereby avoid the unpleasant after-effects which sometimes follow the use of unsuitable toxins. The concomitant filtrates produce immunity to the toxin, while the dominant produces intolerance.

12. By means of the systematic employment of the differential cutaneous reaction it is possible to immunize a patient against a toxin, provided, of course, the clinical symptoms are kept under accurate observation, with much greater ease and certainty than has heretofore been possible. The technique is simpler, the results are objective and more certain, and more easily perceived than the results of the optional method.

The differential cutaneous reaction is recommended to other investigators who wish to gain an insight into the pathologic conditions of tuberculous patients, and who endeavor to influence the tuberculous process by immunization methods.

In reference to the subject of "anaphylaxis or sensitization" of the individual, this reaction can be avoided by the use of the T. O. and the filtrates, and observing the dominant and tolerant reaction, and never repeating the use of the dominant tuberculin or the filtrate to which the

system has shown by its reaction that it is intolerant.

CASES

Mildred, aged 8; mother died from malignant disease and operation for same, some six years ago, and child has lived within two doors of a family in which two have died and another one now tubercular. The tubercular family furnished this child with milk for several years. At 6 she was put in school and before the year closed she had to be removed on account of decline; complained mostly of gastric pain, fever and headache, etc. Tonsils removed at 5, were very large and crypts filled with cheesy matter, soft and degenerated. Fingers and toes very clubbed, of a peculiar tint, anorexia, occasional diarrhoea, pupils dilated, abdomen prominent and doughy, and painful in upper portion, liver fully eight cm. below the ribs, no foci to be detected in the lungs, no cough, temperature has ranged from 100 F. to 101.5 daily for some eighteen months, pulse rapid (120 to 140). November, 1908, she was inoculated per the v. Detré method, and no reaction; three weeks later repeated and moderate acute reaction, which faded in three or four days.

Cases 2.—Welch, 42, large woman, 200 pounds; no history of tubercular infection to be obtained, until the last two or three years, when she suffered from some bowel disorder. I was called last fall to see her and found her suffering from a very decided tubercular peritonitis, pelvic infiltration, ascitic, tem. 100, pulse rapid, very pallid and cachectic. Four gallons of straw-colored fluid were removed per small incision under local anesthesia; later exploratory operation and draining were done. All the adnexa glued together and almost impossible to move them; three gallons of fluid removed, peritoneum studded with tubercles, incision closed. She lived two or three weeks.

An autopsy revealed the conditions above mentioned, and additional adhesions of all the organs in the abdominal cavity. The right chest was filled with greenish fluid, and when search was made for the lung, it was found after removing over two gallons of fluid, firmly drawn to the mediastinum, covered with tubercles, but soft and pliable, and with one long adhesion to the posterior chest wall; there were two patches of tubercles on posterior wall of chest near points of adhesions, there was fluid in the left cavity, and adhesions pericardium. She was inoculated twice per the Detré method with no reaction.

Doctor, aged 30; contracted tuberculosis from his patients, as can be quite positively traced.

He manifested the infection after an attack of pneumonitis. He was inoculated by the von Detré method and the dominant form proved to be the T. O. of Koch. I may say that the reaction was not very active and faded in a very few days.

Doctor Blank, who had been in ill health for over one year from some obscure disorder of the digestive organs, and was at the time of inoculation feeling quite ill, was in Washington, D. C., in attendance at the International Congress. He sought the advice of Prof. Detré, and took his form of cutaneous inoculation for diagnostic purposes. In twenty-four hours the reaction was very sharply defined, the dominant form was the T. O. of Koch, there was a slight reaction to the B. F. Deny's, and only very slight traumatic reaction on the bovine point. The dominant point presented a large tubercle or papule, firm and hard to the touch, an erythematous areola about four cms. in diameter, no vesication, and shaded off gradually in the clear skin. The subjective symptoms were the following: Slight tenderness, a prickly itching, occasionally slight tingling pains in the region of the papule and extending up the arm, no glandular infiltration, no fever, no headache, and no general symptoms. The papule and the redness did not fade entirely out for some ten days.

Prof. von Detré translated the reaction the next day and rendered the following: "That the subject was infected or had had an acute infection, but that with good care and proper hygienic living would resist all further invasion; that the antibodies were sufficiently active to meet the infection. If such lesion existed or exists, there is no manifestation of it at this time, and remains without being located."

It is eminently proper for a medical man to devote from one to two hours to a formal address, but it is a stretch of propriety for any man to consume two hours of the time of a medical society in the reading of a regular paper which, according to the rules of the society, should be confined to fifteen or twenty minutes. The difficulty of many men is that they have an exaggerated idea of their own importance or else they lack the faculty of "boiling down" their speeches and avoiding iteration and reiteration.—Indiana Medical Journal.

A mesenteric cyst may give the same signs as a small ovarian cyst. Mesenteric cysts, although movable, are usually attached to the ascending colon. When the colon is dilated a direct relation can be made out between the gut and the tumor.

SEMINAL VESICULITIS AND APPENDICITIS—CASE REPORT.

A. W. NELSON, M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

In reporting this case no attempt will be made to enter into detail of the symptomatology of appendicitis or seminal vesiculitis, knowing that the profession is well versed in the above diseases without requiring any recapitulation at my hands. Nor will an effort be made to point out the similarity of symptoms that may present themselves in the diseases just mentioned. Besides, I believe that Dr. T. G. Youmans of Columbus has well done that in a paper presented before this association one year ago, and which appeared in the February issue of The Ohio State Medical Journal. As a moment's reflection of the nerve supply these structures will readily serve the purpose.

The object of this paper in reporting this case is the occurrence of both diseases in one individual at the same time, or rather the development of an appendicitis on an already existing seminal vesiculitis, which at the time rendered the diagnosis of appendicitis rather difficult.

D. C., 32, married, waiter, American; exceptionally intelligent for his station.

History—Had measles and influenza years ago. Always enjoyed good health except for the venereal diseases from which he had suffered. Gonorrhea, first attack at 15 years, lasting three to four weeks, with no complications; second attack at 16 years, lasting three to four weeks, with no complications; third attack at 17 years, lasting six months, with no complications—treated by physician; fourth attack at 18 years, lasting three to four weeks, with no complications; fifth attack at 20 years, lasting three to four weeks, with no complications—treated by self.

At twenty-fifth year contracted syphilis, receiving "intermittent" treatment by mail from a Chicago firm for about two years; while receiving the above treatment his right testicle swelled, and has remained in that condition ever since.

At 30 years again contracted gonorrhea, which he treated himself by injections, for about six months, when frequency and precipitate urination developed, leading him to consult a physician in New Orleans, where he was treated for three months (by irrigations), then moved to New York and received treatment for ten months longer, when discharge disappeared and only a few shreds remained.

Came to me April 21, 1908, presenting the following condition: Scanty purulent discharge from meatus. Urine first and second turbid and containing shreds; right epididymis enlarged and somewhat indurated; prostate likewise a little enlarged and slightly nodular; seminal vesicles enlarged. Treated by massage and irrigation.

May 19, complained of pain in right epididymis which in a few days responded in a measure to KI and Mercurial Ointment. Not being perfectly satisfied with results, I suggested a trial of antigonococcic serum and injected the first dose on May 29, when on May 31, thirty-six hours after the injection, there appeared an apparent reduction in size of the right epididymis, with the disappearance of pain. On same day—May 31st—gave a second injection of the serum, at the same time instructing the patient to report the following day, June 1, on which date no unusual symptoms were present—pulse 72, temperature 98.2, respiration 18. Was told to return the following day, June 2, when the following were noticed: Pulse 90, temperature 99, respiration 20, epididymis free from any pain. Injected third tube of serum and instructed to return the following day, June 3, when he reported at 10 a. m., complaining of abdominal cramps, malaize, stiffness of the lower extremity on the side of injection, restless, dizzy and nauseated—"Feels all broke up." Bowels moved at 6 and 8 a. m.; temperature 98.2, pulse 75, respiration 19. Up to present the Mercurial Ointment and Pot. Iodide were continued.

Prescribed for the above condition with the expectation of seeing him the following day, June 4, on which date, at 5:50 a. m., I was called to his home and found him pale, depressed, difficult respiration, coughing, pain in region of injection, the hypogastric and lower half of right thoracic region—shifting from one to the other; more marked in the hypogastric region. He said that early in the morning he had pain in the bladder and rectum. No digestive disturbance. Upon examination, chest and abdomen did not present any objective symptoms. Pulse 76, respiration 21, temperature 99.2.

Treatment, hot applications and hypodermic of morphine.

Second call, 3:30 p. m. Temperature 101, pulse 86, respiration difficult, running between 22-26 per minute and almost impossible to obtain same number twice in succession. Complains of pain in abdomen, gluteal region, right testicle and rectum. The pain still continues to move from place to place. Abdomen hard and tender to touch. Complains whole body feels stiff.

June 5, 2 a. m., temperature 100, pulse 100,

respiration 40. Patient moaning from the severity of the pains. There is pain in chest, aggravated by inspiration with a few moist rales in same. Abdomen tense and not quite as tender as in the previous afternoon. Pain in testicle on handling same only. The general characteristic of the pain still continues, i. e., it still continues to shift from place to place.

June 5, 9 a. m., temperature 100, pulse 94, respiration 42. Pain in chest more marked, while that of the genito-urinary region very slight. Symptoms of nausea and vomiting appeared for the first time.

5 p. m., T. 101, P. 90. Condition practically same as in morning. Taken to hospital.

June 6, 10 a. m. Had restless night; vomited considerably. Temperature ran between 99.2 and 100 degrees Fahrenheit. Pains easier, likewise is the breathing. No pain in genito-urinary tract.

5 p. m. Condition practically same as in morning except reduction in vomiting. Temperature 102, respiration 42 and regular.

June 7, 10 a. m. Temperature since last visit ran between 98.4 and 102. Pains somewhat lessened, abdomen and chest distended; some flatness on right subscapular and axillary region. Flatness does not seem to be influenced by change of posture. Respirations not clear below nipple and in axillary line below fifth interspace; no cough. Vomit contains bile, slightly streaked with blood. Tenderness in region of right kidney and over appendix. Began to suspect appendicitis.

5 p. m. Still vomits. General condition practically same as in morning.

June 8. Diagnosis of appendicitis and decided on operation. When abdomen was opened surgical treatment followed with successful results.

In commenting on the above case numerous interesting features present themselves for consideration.

First. The development of appendicitis at a time when all symptoms that might present themselves were liable to be attributed to the action of the serum, especially so when it was associated with pain in the gluteal region, rectum, bladder and testicle.

Second. The association of two diseases (appendicitis and seminal vesiculitis) whose symptomatology may occasionally be so closely allied that a history and rectal examination are perhaps the only means of diagnosis, when the two diseases occur separately.

Third. The marked respiratory symptoms, viz.: Cough, dyspnoea, pain and rales in chest. Symptoms entirely foreign to either disease of the appendix or seminal vesicles, but common to

diseases of the lungs, pleura, etc. Although according to Bennecke the occurrence of appendicitic symptoms in pneumonia is apparently not infrequent.

The respiratory symptoms were in the early stages of the disease attributed to an embolus lodging in the lung as a result of the serum injection, or to a probable development of pneumonia, more to the former, while that of the later in the disease was attributed to the upward pressure of the intestines.

DISCUSSION.

T. M. Reade, Springfield: I desire to express my appreciation of the excellent paper by Dr. Nelson. This is a subject of the greatest interest, and his work shows extreme patience and splendid ability. These cases come before us from day to day, and I do not think enough attention is paid to them. However, it is very seldom we find cases of such extreme difficulty as these. Even the text-books do not say much about this subject, and I congratulate the doctor on the fine paper he has presented to the section.

THE GENESIS OF THE NON-INFECTIOUS CHRONIC DISEASES OF MIDDLE AND LATER LIFE FROM EARLY MICROBIC INFECTION.

J. B. BALLINGER, M. D.,
Bradford, Ohio.

[Read before the Ohio State Medical Association.]

The long and steadily increasing list of diseases known to have a bacterial or parasitic origin considered with the known role of micro-organisms in the disintegration of organized bodies either living or dead, justifies the theoretical conclusion that this cause of disease is more universal than is now recognized, and that most or possibly all diseases not caused by the various forms of violence may be due either directly or indirectly to microbic or parasitic infection. Aside, however, from any consideration of the universality of such a cause, the development of many of the non-infectious chronic diseases of middle and later life from early microbic infections, especially of the intestinal tract, is a fair inference from acknowledged facts and clinical observation, and in consequence, the influence of such infections on longevity is also an important consideration. If human life has, in fact, a natural limit it is not now being reached, for man does not die of "old age," as has been supposed, but instead from some long-standing chronic disease whose origin is often far back in the for-

gotten past and is unrecorded in the clinical history of the individual.

On the basis, therefore, of a common origin from microbic infections of the intestinal tract and modified by the kind of infection and mode of living chiefly, a class of evolutionary diseases probably exists, many of which produce changes characteristic of "old age" and organic disabilities which limit individual life. In this class, with others, are lithæmia, various forms of rheumatism, arterio-sclerosis, some cases of endocarditis, myocarditis, and chronic nephritis; apoplexy, diabetes, and the various forms of lithiasis; neuralgia, neurasthenia, hysteria, chorea, migraine, epilepsy, melancholia, and many forms of insanity; and a number of gastric, intestinal, and skin diseases.

That intestinal infections occur early in life, even in infancy, scarcely admits of doubt. Reactions in the form of colic, jaundice, diarrhœa and fever, occurring in infants but a few days old sufficiently attest this fact; while summer diarrhœa, ileo-colitis, dysentery, and typhoid fever are further instances of specific infections of various periods. Once established, infections are often permanent. This statement is not only supported by clinical facts but has lately been strengthened by the discovery of typhoid-carriers. A degree of immunity to some bacteria evidently becomes established, but that their influence on the organism entirely disappears therewith admits of serious doubt. Not only does intestinal infection often remain permanent but in many cases recovery of the bowel never completely takes place. This is notably true of ileo-colitis, which is usually followed by a chronic colitis which continues with varying intensity for many years and often throughout the life of the individual. Constipation is the immediate and persistent consequence of this colitis. This is the ordinary form of constipation so frequently encountered in practice. It is often observed in infancy following an evident infection of the bowel, and in this early period most of the cases in adult life have their origin. The effect of this chronic colitis with its attendant constipation is to place a degree of obstruction in the canal, with consequent stagnation of the intestinal contents, thus favoring the development of any existing infection and increasing the liability to reinfections.

With the establishment of a permanent infection of the colon begins an evolution of disease, slow it may be and long unobserved, but enduring as the life of the individual; but in those subjects in which a virulent infection has been followed by a chronic colitis and constipation this patho-

logical evolution is greatly accelerated and becomes traceable through life by a characteristic history. These are the cases that have occasional attacks of autointoxication, especially in early life. Many of them are poorly nourished, have capricious appetites, and complain much of aching limbs. As they approach adult life many develop gastric troubles, especially hyperacidity. They are generally nervous and often have cardiac palpitation, neuralgia, or migraine. Others have disordered urinary secretion and occasionally calculus, rheumatic or gouty affections of the joints, paræsthesias, muscular cramps, and many other peculiar and unclassified symptoms.

The infected intestinal contents must undergo *in loco* fermentations and putrefactions as they would under like physical conditions outside the body, limited only by the antiseptic effect of the natural secretions of the canal. The result of such bacterial decomposition is the constant production of various foreign substances chiefly of the nature of alkaloids and organic acids, the predominance of any one of these depending upon the prevailing kind of infecting bacteria and the composition of the intestinal contents. Under the favorable condition of stagnation already noted, and further influenced by dietetic errors these produce locally and by absorption most of the symptoms and diseases to which reference has been made. These symptoms admit of being classified somewhat definitely according to the probable nature of the producing cause as lithæmic or gouty, gastro-intestinal, nervous, and reflex; but as the causes of the different classes are often associated in the same case, their symptoms are often intermingled.

The symptoms denominated lithæmic may be conceived to be produced by the absorption from the alimentary canal of substances having the character of organic acids which may be toxic and which probably modify the chemical reaction and coagulability of the fluids of the body, and by combination with various bases form irritative substances which may be precipitated in various tissues and on various membranes, as the synovial membrane of joints, the inner coats of arteries, the endocardium, the pelves of the kidneys, etc. In this manner might be produced many forms of arthritis; arterial degenerations and endocarditis, and consequently embolism, thrombosis, and apoplexy; renal and vesical calculi; neuritis, and reason exists for believing that acute rheumatism may be an acid toxæmia resulting probably from various intestinal infections.

The gastro-intestinal symptoms are due in greater part at least to the local irritant effect upon the mucosa of the products of fermentation

and putrefaction. The presence of the acids of fermentation in that portion of the canal whose contents naturally should be alkaline is a frequent cause of disturbed peristalsis and intestinal colic, and in suitable subjects the most likely cause of the pain and other symptoms attending an attack of mucous colic. Bacterial decomposition is doubtless most active and permanent in the colon and lower part of the small intestine, and with increasing degrees of stagnation the process ascends the digestive tube until the stomach is reached, when there appears a variety of local symptoms and diseases usually classed as gastric neuroses and generally attributed to extra-gastric causes. Here hyperacidity from the acids of fermentation plays an important part in producing symptoms. Depending upon this cause, and exaggerated at times by a coincident toxæmia, there may be pain, hunger, dizziness, nausea, or heartburn, occurring especially when the stomach should be empty and quiet; gastric hyperæsthesia, disorders of motility, and various reflex symptoms hereafter to be considered. Particular groups of this class of symptoms often lead to the diagnosis of gastric disease which does not really exist. It is possible, however, that the corrosive action of some of the products of fermentation may cause gastritis, and with a local bacterial invasion of the mucous or lymphatic tissue produce gastric or intestinal ulcer. Many of these gastro-intestinal symptoms are often attributed to other diseases, as appendicitis, cholelithiasis, gallstone disease, and tuberculosis. But it would not be difficult to establish the fact that symptoms of bacterial decomposition in the alimentary canal always antedate as well as accompany these affections, and it is not unreasonable to refer most of the infections of the appendix and gallbladder to this origin; and surely a chronic toxæmia with such lowered nutrition as often results from the digestive disturbances under consideration would be favorable to the development of a tubercular infection.

The nervous symptoms result from a chronic toxæmia due to the absorption from the alimentary canal of substances irritative and convulsive in their effect upon nervous tissue. They originate in bacterial processes, resemble somewhat strychnia and other alkaloidal poisons in their actions, and increase the reflex excitability of both the sensory and sympathetic nervous systems. When such toxæmia becomes sufficiently intensified and prolonged various nervous symptoms are produced, and sometimes actual tissue changes may occur, as in chronic alcoholism and other chronic drug addictions. To such a toxæmic origin probably should be attributed hysteria,

melancholia, some forms of delirium and insanity, and such convulsive diseases as chorea and epilepsy.

Many nervous symptoms are reflex in character. Of this type are most of the neuralgias, the paræsthesias, vertigo, probably migraine, cardiac palpitation, many local vaso-motor disturbances, sudden attacks of weakness, besides a great number of indescribable sensations. Two conditions probably are necessary to the production of neuralgia or other reflex symptom; an increased excitability of the entire nervous system resulting from gastro-intestinal toxæmia and the existence somewhere of a local irritation reflexly connected with the affected nerve. The latter condition may be a trauma, an error of refraction, or a disease or displacement of the female pelvic organs; but it is most frequently an irritation or a disease of the mucous lining of the alimentary canal or its extensions. Neurasthenia, the most familiar and intractable example of this type of affections, is a toxæmio-reflex symptom-group whose focus of origin is the alimentary canal. A complete clinical history, if it could be obtained, would probably show that neurasthenia is always antedated by muco-membranous colitis and constipation. With an exalted excitability of the nervous system the acids and other irritating substances resulting from bacterial action produce impressions upon the sympathetic nerve-endings in different parts of the canal, but especially in the diseased colon. These impressions, though painless, are transformed somewhere, probably in some of the abdominal ganglia, into subjective sensations and reflected to various parts of the sensory nervous system. The pressure of the palpating hand upon the tender colon will often produce nausea, pains in distant regions, cardiac disturbance, and sudden sensations of weakness. So, too, increased peristalsis from any cause, muscular exertion, and in extreme cases even mental emotions, will produce the same effects. The sudden and extreme degree of weakness so characteristic of neurasthenia is not so much an exhaustion as it is a kind of reflex nervous shock coming through some particular reflex center. Even introspection, which is given much prominence in the production of neurasthenic symptoms, is not wholly voluntary but is suggested by strange feelings of unrest and impending danger begotten of toxæmia and reflex action. Various periodical symptoms, such as headache, migraine, neuralgia, convulsive seizures, etc., occurring in persons otherwise in apparent health, because their occurrence so frequently synchronizes with the close of the digestive period when the acids of decomposition are most abundant in the con-

tents of the stomach and intestine probably also owe their excitation to this very common cause of reflex action.

Heredity probably receives too much credit as an element in the production of some diseases, yet it may be that hereditary vitality and the perfection of intra-uterine nutrition may have much to do with infantile resistance to infection. But while it can be conceived that a fœtus nourished on the poisoned, and sometimes infected, blood of its mother may be predisposed thereby to some particular disease, it is chiefly the introduction of bacteria into the alimentary canal after birth that determines the clinical history and sets the limit of life for the individual. The prevalence of the same type of chronic disease in different members of the same family often depends upon the fact that in childhood and youth they have lived under the same environment and therefore probably have acquired the same infections.

In general, then, disease and death are the measure of the victory of the microbic and parasitic forces of disorganization in their persistent warfare against an individual life, but it is especially when early in life an intestinal invasion has been followed by a permanent colitis and constipation and the alimentary canal thereby converted into a bacterial culture tube, that the development of disease becomes rapid and a well-defined clinical history apparent. These fundamental principles of aetiology give increased scope and definite aim to preventive medicine and add hopefulness of further mitigation of disease and increase of longevity as the reward of continued efforts at therapeutics and sanitation.

DISCUSSION.

J. M. Rector, Columbus: Mr. Chairman and gentlemen, I am sorry I was not present at the beginning of the paper, and therefore did not hear all of it. What I did hear has interested me very much. I noticed one statement which the doctor made to the effect that neurasthenia always preceded colitis. Now I have not had very much experience on that line, but a good many of the authorities, such as Dr. Norton, and others, contend that neurasthenia follows this disease of colitis. Dr. Ballinger admitted this later, because he says further along in his paper that constipation attacks children, and that it later runs into colitis. Now you see very few nervous children, and it is my experience that when you treat nervous symptoms separately and let the colitis alone, the colitis does not improve, whereas you turn it around the other way and treat the colitis, improve the general nutrition and do away with the auto-intoxication, the nervous symptoms will all disappear although no specific treatment be directed to them. That is about the only comment I have to offer. I just heard a portion of the paper.

Chairman Hoover: I think that Dr. Rector misunderstood the essayist. I will take the privilege of reading from Dr. Ballinger's paper, as follows:

"Neurasthenia, the most familiar and intractable example of this type of affection, is a toxæmioreflex symptom group whose focus of origin is the alimentary canal. A complete clinical history, if it could be obtained, would probably show that neurasthenia is always antedated by muco-membranous colitis and constipation."

J. B. Ballinger, Bradford: I do not know that I have anything to add to the paper. The statement quoted from my paper shows that I regard neurasthenia as a follower of colitis and constipation, as the chair has shown. I think that is undoubtedly the case; and the reason we do not see much nervousness in children is simply that this toxæmia develops slowly, and increases with the persistence and gradual aggravation of the colitis and constipation, as life advances. It was the purpose of this paper especially to insist upon the recognition of the presence and persistence of this colitis as fundamental to the development of various manifestations of disease.

PHOSPHATIC CASTS OF UNKNOWN ORIGIN, COMPLICATING GONORRHEA, WITH REPORT OF CASES.

FRANK A. OAKLEY, M. D., C. M.,

Lecturer Genito-Urinary Diseases, College Physicians and Surgeons, Cleveland.

[Read before the Ohio State Medical Association.]

My excuse for this paper will be the apparent rarity of the condition reported.

I have made diligent search of the literature on the subject and have been unable to find anything which in any way describes these cases; so that we have nothing to go by but our own deductions.

The rarity of the condition may be judged from the fact that from my office records of over 1000 cases of gonorrhœa, only three were found wherein these peculiar phosphatic casts existed.

We are all familiar with the showers of phosphates which appear in the urine of individuals at certain times, sometimes even appearing as a white, milky discharge at the termination of the act of urination.

We also know well the phosphate crumbs which appear in cystitis, but this cast which I am about to describe is totally different from these.

Gross appearance—Pure snow white; about one inch to one and one-half inches in length; one-eighth to one-fourth inch in width; very

gritty to the touch, not readily disintegrated by water; sinks to bottom of glass.

Microscopic examination—Mucus, epithelia, pus corpuscles (when there was urethral discharge), mass made up mostly of very large complete triple phosphate crystals.

CASE I—MAY, 1904.

Italian, fruit merchant, 24 years of age; unmarried; highly neurotic. Family history good. No previous serious illness. Contracted gonorrhœa, in New York four years ago. Treated by hand injections and usual balsamics. After about three months noticed that once in twenty-four hours he would pass with the last drops of urine (spasmodically ejected) a white substance. A slight amount of pain would accompany the discharge. Then began the round of clinics and physicians; nobody seemed to be able to account for the condition nor to relieve it. Came to Cleveland four months ago. I could make nothing out of his story, and for several days was unable to see the casts because he could not tell when they would appear. However, finally he passed one in the office. A careful examination was made of it, with result already given.

Examination of Patient.—Testicles normal; urethra normal in size; no stricture. Cut-off muscle very tight; posterior urethra tender; no visible discharge. Urethoscopic examination showed a number of inflamed ducts of urethral glands; also areas of inflammation at the penoscrotal angle and bulb. Posterior urethra much inflamed, bleeding easily. Urine, first glass showed shreds, coarse and fine filaments; second glass, comma and small flakes. Reaction acid: Sp. G., 1.020; albumin, none; sugar, none; phosphates, 2 per cent; sulphates, 1 per cent; chlorides, 4 per cent.

Microscopic Examination.—Pus epithelia; no casts.

Diagnosis.—Chronic anterior and posterior urethritis. The patient could not tell when the casts were about to appear; he might pass one once a day or once in two days, or even once in three days; never a longer time elapsed than three days. The urine was always clear. The casts might come with the beginning of urination, in the middle or at the end of the act, always more or less pain.

The usual treatment for chronic urethritis was instituted and kept up for months. This condition was greatly benefited, but no change in the passing of phosphate casts. I then called Dr. W. E. Lower in consultation. Dr. Lower examined the patient and the cast. Also made a cystoscopic examination; a good view of the

bladder was obtained, but nothing abnormal discovered.

This patient has been under observation for four years and the condition is the same as when he first presented himself at the office.

CASE II—JULY, 1907.

Hebrew, aged 22; unmarried; neurotic type; in very poor physical condition; anemic. Family history negative. Patient had usual diseases of childhood; typhoid fever four years ago.

Gonorrhœa six months ago; treated by hand injections and usual internal medication; no complications. Morning drop. Moisture at meatus; a slight amount of light, thin pus may be expressed from meatus. Gonococci present. Complained of slight pain on urination, which was frequent, about every hour or two hours. Pain in back, at sacro-iliac syncondrosis; inability to work.

Urine—First glass, somewhat cloudy; long purulent shreds which sink; also coarse flakes. Second glass clear; some long filaments, coarse and fine flakes.

Reaction—Acid; Sp. G., 1.012; albumin, none; sugar, none; phosphates, sulphates, chlorides, normal.

Microscopic Examination—Pus epithelia; mucus.

A uretoscopic examination was not made because of the pain produced by instrumentation.

Diagnosis—Chronic antero-posterior urethritis. This patient passed the same sort of phosphatic casts as No. 1. The only difference was that these casts were sometimes broken and were always passed at the end of urination and accompanied by more pain than No. 1. They were passed daily, usually in the afternoon, when the patient came to the office for treatment. Sometimes they would follow the irrigation of the bladder when they would be stained slightly brown by the permanganate solution.

The usual treatment for chronic urethritis. After three months' treatment, the urethritis cleared up; still a few flakes remained in the clear urine. But the phosphatic casts still remained and are still there, but not so regular in appearance; a later cystoscopy revealed a normal bladder.

CASE 3.

American, 24 years of age; unmarried; good family history. Personal history good. An acute gonorrhœa.

I took care of this patient myself. He made very satisfactory progress, and at the end of the fourth week thought himself cured, when he discontinued treatment. Some weeks later he

appeared at the office with an acute exacerbation; the result of a night with Venus and Bacchus. This again soon cleared up to his satisfaction. About two weeks after he had of his own advice abandoned treatment he returned to the office very much frightened, saying that he had passed from his urethra a small white worm which he had in a little box. It was our old friend the phosphatic cast. Only three or four times did this man pass these casts; then they disappeared entirely.

As to the origin of these casts it is purely a matter of speculation. You will notice that they all appeared as a complication of a posterior urethritis. They were all well formed. Irregular as to time of passing and always with clear urine, no bleeding, no cystitis. Also that in two cases they did not disappear, but seem to be permanent.

It may be possible that they form in some pouch or pocket in the bladder or posterior urethra, or prostate gland, but after careful examination no such pouch or pocket was discovered.

It may also be possible that they form in the ureter, but if so, being rough and gritty, they would probably produce symptoms of colic.

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CONGENITAL MALFORMATION OF THE SIGMOID WITH ANGULATION—DUE TO ADHESIONS TO AND BEHIND THE LEFT BROAD LIGAMENT.

BENJAMIN MERRILL RICKETTS, M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

Obstipation being so prevalent with so many causes both mechanical and functional, the following case is reviewed without further comment:

Miss H., age 35, white, single, weight 105 pounds.

At the age of 27 her weight was 175 pounds. Has had obstinate constipation since birth, which it has been more severe during the last eight years, with more or less pain in the lower abdomen from time to time, but no relief was ever obtained.

She came under the care of C. C. Fihe about August 1, 1908, when he made several unsuccessful attempts to introduce the proctoscope through the recto-sigmoidal opening, persistent efforts under most favorable environments failing to accomplish this. With the proctoscope in-

troduced to the recto-sigmoidal junction and the finger in the vagina to that point no neoplasm or cause of the obstruction could be detected. Ocular inspection by means of reflected light failed to reveal the opening or any irregularities whatever. Fæces and mucus were absent, although the rectum had been irrigated sixteen hours previously, and were absent during the several examinations made by Dr. Fihe.

An attempt was made to introduce a silver catheter through the protoscope into the recto-sigmoidal opening, but without avail. The uterus was moveable and normally situated, with slight tenderness over the left, but more defined on the right side about the ovary and appendix. At times nausea and vomiting were quite severe and persisted during the last eight years; appetite usually good, but bowels were never emptied except by means of an enema or cathartics to produce watery stools. Not more than one pint of water could be retained at any one time.

A congenital malformation of the gut, intra-abdominal adhesions, a malignant or non-malignant neoplasm was now assigned as the direct cause of the obstipation.

An abdominal section was resorted to on August 6, 1908, under chloroform narcosis, with a median incision made extending from the umbilicus well down upon the pubis. This revealed a diseased appendix, cystic degenerated ovaries, tightly bound and buried in a mass of adhesions behind the uterus, and a sigmoid much smaller than normal, and diminishing in size as it approached the rectum.

The sigmoid was incorporated in the mass and was crossed by three distinct bands.

After removing the appendix and right ovary, the latter containing a blood clot the size of a wren's egg, the left ovary was removed with considerable difficulty, as it was adherent to the lower portion of the sigmoid, and buried in dense adhesions. Their separation gave the gut mobility. With the sigmoidoscope introduced through the rectum to the recto-sigmoidal outlet, and the hand in the peritoneal cavity, it was found impossible to enter the sigmoidal cavity, not because the cavity was not large enough, but because the outlet was too small. In the absence of a neoplasm and other mechanical defects this was ascribed as the direct cause of obstruction. If a sound had been passed from above downward through an opening in the gut the cause of the obstruction could no doubt have been made more definite, but this was not necessary at this time, because of the fact that she had lived so long with this condition, and the dangers incident to resection and reanastomosis

in such a remote locality. If necessary it could be done with greater safety subsequently. The possibility of inflicting upon her the disagreeable consequences of a permanent artificial anus in the belly wall at the upper end of the coccyx or implantation of the ileum into the ano-rectal margin were also objections.

August 11th. Since the primary operation the abdomen has become gradually distended without gas or feces passing per rectum. Pulse 130 and feeble, temperature 99. It was evident that there was complete obstruction, probably in the lower portion of the sigmoid, or at the recto-sigmoidal junction.

2 p. m., August 11th, with cocaine for local anesthesia, the abdomen was opened three inches to the left of the umbilicus. That portion of the gut presenting was rapidly sutured to the edges of the incised wall and an angular glass tube with a flange sutured in the gut. To this tube was attached a rubber tube extending to a pan under the bed for drainage and irrigation. Much gas and the watery contents of the bowels continued to escape into the pan for five days, when the tube could no longer be kept in place.

The character of the discharge at this time indicated that the jejunum had been opened. The fluids digested the exposed skin of the belly and fingers coming in contact with it. Stearate of zinc was found to be most useful in giving comfort.

From August 11th to September 19th the passage of gas and feces gradually increased in amount, and with considerable regularity, both with and without enemas.

September 19th. An attempt was made with cocaine for local anesthesia to close the open gut and belly wall. While there was some question as to the advisability of using thirty-day chromocised catgut for suturing the gut, fearing that it would be digested before union was complete, it was used for such suturing, without opening the peritoneal cavity. These suspicions were fully verified, in that the sutures were disintegrated on the third day and the contents of the bowel escaped into the dressings as usual. The general health had greatly improved and she was able to walk about the house.

On September 26th, under chloroform narcosis, the gut was detached from the abdominal wall, clamped above and below and anastomosed with celluloid linen. The abdominal wall was closed in the usual way, resulting in an uninterrupted recovery. She has gradually improved, in strength and weight and the obstipation much less annoying than it has been for many years.

Laxatives are resorted to now and then, and

she says that she is amply compensated for all these distressing experiences.

April 10, 1910.—Patient in a most excellent condition. Bowels move regularly without laxatives of any kind or rectal injection.

COMMENTS.

1. Her condition on August 11th was desperate and would no doubt have had a fatal ending had not the gas and watery contents of the bowels been evacuated.

2. It is a foregone conclusion that absorbable suture material should not be used for anastomosing the jejunum.

3. It was shown that the jejunal contents are antiseptic, for there never was any pus found in the primary wound (which was infected) while the contents of the jejunum flooded the abdominal surface and the infected wound.

4. The difficulty to stool during the first twenty-seven years of life was probably due to malformation (stenosis) of the recto-sigmoidal opening.

5. The increase in that difficulty thereafter was due to aggravated angularity, resulting from adhesions.

6. The lessening in caliber of the sigmoid as it approached the rectum was due to watery consistency of the excrementitious matter, which did not keep the lumen normally distended.

7. The colostomy should have been a colostomy and not a jejunostomy.

A NEW METHOD OF GASTROENTEROSTOMY.

EDWIN A. HAMILTON, M. D.,
Columbus.

[Read before the Ohio State Medical Association.]

The operation hereinafter described was first used by the writer to see if a circular gastro-enterostomy opening would drain more efficiently than the long slit of the usual procedure.

It has been conclusively demonstrated that the usual opening does not drain the stomach contents except in the presence of pyloric obstruction, and curiosity prompted the experiments made to determine whether the shape of the artificial stoma had any influence on its drainage capacity. The results of these experiments in every way tallied with the original—i. e., that in the absence of pyloric stenosis the passage of the contents of the digestive tube traveled their accustomed way uninfluenced in any important particular by the artificial opening.

In performing this work, a portion of the posterior wall of the stomach is pushed through the transverse meso-colon in the usual way and together with a loop of the jejunum is surrounded by an ordinary rubber catheter. The catheter is held firmly to the enclosed tissues by two rubber sheathed hemostats to keep the parts from slipping through the rubber loop. A circular portion of the stomach wall and an oval part of the intestine is excised; these openings are then joined by a single suture of Von Brun's celloidin linen inserted by the Connell method. This makes a firm and substantial union, bringing into the bite of each stitch all the coats of the bowel, so that leakage, except in a case of outrageous carelessness, need not be feared. I have forced water under considerable pressure into the stomach and intestines so joined and have found, even in the cadaver, that this stitch makes a water-tight joint, and as peritoneal exudate occurs in the living in four hours so strong as to wall off liquids, the fear that one row of sutures may not be strong enough, is groundless. There is nothing to prevent a reinforcing outside peritoneal layer of sutures if there is any fear that the line of union is not sufficiently firm.

There are three features which mark this procedure:

First. The circular opening.

Second. The excision of tissue which is a safeguard against cicatricial closure of the orifice.

Third. The operation requires no special apparatus and can be performed with the contents of the average pocket surgical case.

DISCUSSION.

Ed Ricketts, Cincinnati: I am very much impressed with this procedure, and am impressed with the essayist, because he does not name it Hamilton's gastro-enterostomy. There is no doubt that the circular opening has advantages over the slit as done by many operations at the present time. The simplicity of this, the use of the catheter for bringing the surfaces up, so you can do the stitching according to the Connell method, and then after relieving the lower catheter, allow it to slip back—there is no doubt, for the reason of the simplicity of the operation, suggested by Dr. Hamilton, that it will attract attention. The Murphy button, as you know, has many objections. While it gives the circular opening in a gastro-enterostomy, in many cases it has some objections. One case I had a year ago of gastro-enterostomy by the Murphy button, in a case of cancer, while the patient lived six or eight weeks, yet this button was never passed per rectum, nor were we permitted to have an autopsy. I congratulate Dr. Hamilton on the paper.

BOOK REVIEWS

A TEXT BOOK OF PRACTICAL OBSTETRICS. By Egbert H. Grandin, A. B., M. D., with the Collaborations of George W. Jarman and Simon Marx. Fourth edition, revised and enlarged. Illustrated with forty-seven full page photographic plates and one hundred and sixteen illustrations in the text. Price \$4.50. F. A. Davis Company, Publishers, Philadelphia, Pa.

The fourth edition of this work offers practically a new book. The original aim of the work has been maintained, and for a brief, accurate, well-illustrated and practical obstetrical work we know of none better. The volume contains the latest views on bacteriology; the toxemias of pregnancy have been added, and the chapters on surgery of labor and the puerperal state have been re-written.

ESSENTIALS OF GENITO-URINARY AND VENEREAL DISEASES. Second revised edition. Essentials of genito-urinary and venereal diseases. By S. S. Wilcox, M. D., Lecturer on Genito-Urinary Diseases at Starling-Ohio Medical College, Columbus, Ohio. 12 mo of 321 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$1.00 net.

This volume measures up to the standard of the Saunders Question Compend series. The mere fact that over 290,000 copies of the "Compend" series have been sold is indisputable evidence that not only students, but physicians, believe that they are self-helps. It must be acknowledged that these "compends" have condensed within relatively small space a surprising amount of information. However, there are volumes that are neither desirable nor practical.

It seems that in such a recent revision that this work has undergone the subject matter should be brought more up to date. No mention is made of the Wassermann reaction in syphilis; bacterial vaccines; the value of the X-ray in the diagnosis of renal calculi, nor argyrol in Neisser's disease.

NUTRITION AND DIETETICS. A Manual for Students of Medicine, for Trained Nurses, and for Dietitians in Hospitals and Other Institutions. By Winfield S. Hall, Ph. D., M. D., Professor of Physiology, Northwestern University Medical School; Lecturer on Physiology and Dietetics in Mercy Hospital and Wesley Hospital Chicago. New York and London, D. Appleton & Co.

A concise text-book on the above subject showing systematically the food needs of the body under varying conditions and the best way to meet them. The subject matter is well selected and attractively presented. While intended pri-

marily for students and nurses, it will also be found of interest and value to the practitioner. It is chiefly a book on principles of feeding, although some explicit lists and recipes are also given.

MODERN SURGERY. The new (6th) edition, greatly enlarged. Modern Surgery; general and operative. By J. Chalmers DaCosta, M. D., Professor of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia. Octavo of 1502 pages, with 966 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$5.50 net; half morocco, \$7.00 net.

We believe that this manual presents in clearer terms and in a more concise form a greater variety of surgical conditions, fundamental surgical principles and operations than any other single volume.

This is the sixth edition of the work, and as the author says, "The book grows larger with each edition, and I view this growth with regret and apprehension, feeling somewhat like the elder Weller when he saw the woman drink nine and a half breakfast-cups of tea and noticed her 'swellin' wisely' before his 'wery eyes.'"

Almost every section has been altered or added to for the sixth edition. The following are a few of the newer accepted surgical methods considered in detail: Arteriorrhaphy, Crile's arteriovenous anastomosis for transfusing blood, Brewer's tubes for transfusion, Horsley's operation for chronic spinal meningitis, crushing operation of decompression for brain tumors, Bier's intravenous local anaesthesia, the intraglandular extirpation of goiter, Lorenz treatment of hip disease, Bier's treatment of inflammation, Wright's views on inflammation, bacterial vaccines, untoward effects of sera, tuberculin in diagnosis, Wassermann's reaction for syphilis, the serum diagnosis of cancer, acute dilatation of the stomach, dermoids of the sacrococcygeal region, radium, electrical injuries, and the value of the X-rays.

MEDICAL DIAGNOSIS. A Manual for Students and Practitioners. By Charles Lyman Greene, M. D., St. Paul, Professor of Medicine and Chief of the Department in the College of Medicine, University of Minnesota, etc. Third edition, revised, with seven colored plates and 248 illustrations. B. Blakistons Sons & Co., Philadelphia, 1012 Walnut St.

The third edition—a condensed and compact little work on the above subject. It presents each topic clearly and succinctly with the avoidance of all unnecessary discussion. A remarkable amount of material will be found within its covers, systematically arranged for rapid reference.

The Ohio State Medical Journal

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THE TOLEDO MEETING.

Our annual meeting will convene in a few days at Toledo and should be one of the largest and best in our history.

The local committee has completed its preparations, and these, as shown on another page of this issue of THE JOURNAL, are upon a very elaborate scale.

First, the scientific program is of an unusually high standard. Some of our best men in the state are on the list this year, showing the wide and growing interest in these meetings. One of our distinguished guests of a year or so ago, a man whose name is known from one end of the country to the other, commented upon the unusual character of our meetings. We may well be proud of our past record and look forward with keen anticipation to this coming meeting. The special speakers, nine in number, are widely known and well worth going the length and breadth of our state to hear.

Second, there will be many important matters brought before the House of Delegates, among them the desirability of a medical defense plan in connection with our Association. All interested should be sure to be on hand. While such matters are un-

der the jurisdiction of the House of Delegates, the presence of a large and representative attendance insures the informal discussion of organization matters between meetings, with a consequent formation of a general sentiment which tends for the wiser and broader action by the members of the House and more representative of the profession as a whole.

Third, the social side is by no means of little importance, and for this meeting most attractive arrangements have been made for our entertainment. Toledo is cordial and hearty in its promises, and former experience shows that it has never failed to fulfill them.

There are so many good reasons for going this year that we can hardly see how anybody will stay away.

SUGGESTIVE POST-PRANDIAL WIT.

In times past there have been occasions when the speakers at the annual banquets of our State Association has been criticised for the character of their remarks—or more especially for the anecdotes related.

Without applying this criticism to any particular meeting of the State Society,

it may be said that the medical profession, as a whole, does not approve of indecency of speech in banqueting hall nor any where else. It is admitted that all too frequently the humor of the after-dinner speaker is tinctured with allusions and innuendos not fit to be used in polite society. The professional talker seems to think that something of this kind is expected of him. Nothing could be further from the truth. Nine persons in ten, perhaps a larger proportion, of those who attend the banquets of our society are disgusted with attempts at wit or humor which sacrifice decency. It is known to the writer that attempts have been made to avoid this calamity in some instances. That they failed is not to be attributed to want of forethought, but to inability in foresight. For a committee to suggest to one who is asked to favor a company with an oratorial effort, that he is expected to be decent, is a bit embarrassing to the committee. There is a possibility that it might give offense and that there would be difficulty in filling out the program. Other societies than the medical have been in the same embarrassing predicament. The problem is sometimes solved by employing paid experts in public speaking, whose reputation will not permit them to indulge in excesses of speech which are offenses against modesty.

There is no doubt that a solution of this difficulty can be and must be found. It is especially necessary that the parent society should set the example to the county and district societies. With rare exceptions one finds nothing worthy of criticism in the conduct of the component associations. And yet occasionally there is an inexcusable lapse, even when laymen are present, which brings discredit upon the whole profession.

The high plane of morals upon which we now stand before the public demands that there be no letting down of the bars in the banqueting hall.

THE ATTACK ON THE VITAL STATISTICS LAW.

As noted in a former issue of *THE JOURNAL*, the test case of J. J. Boone, involving the legality of the registration law, was decided in favor of the state.

It was to be hoped that this would settle the controversy, but the contestant, it would seem, contemplates appealing from the decision even to the Supreme Court, and, although not a member himself, has written a circular letter to various county and district societies soliciting financial support for this object.

We would deprecate any such action on the part of our societies, not from any personal animus whatever, but simply because we believe that the law is in the interest of the public good and merits our support. It must be remembered that inasmuch as the state has supplied medical boards and medical restrictions, laws, etc., it has a right to demand certain services in return.

We would also draw attention to the fact that there are two misstatements in his appealing letter. In the first place, he writes that the minimum fine for failure to report is \$50, when the fact is that the minimum fine is \$5. Secondly, he states that "this law supersedes the assessor taking a list of births, for which, of course, he was paid." This is untrue, as the assessor received no compensation for this work.

A NATIONAL DEPARTMENT OF HEALTH.

We would call attention to the speech of Senator Owen delivered before the United State Senate, and printed in this number of *THE JOURNAL*. The medical profession is profoundly interested in this subject, having known for many years that such a department is urgently needed. It has been a source of national shame and a reproach to our boasted culture and progress that our domestic animals and farm products were

of more importance to our government than the health of our citizens.

After long agitation and in the face of countless rebuffs some of our foremost physicians, notably our own C. A. L. Reed, working perseveringly and untiringly, have at length achieved this much, the enlisting the efforts of Senator Owen, who has presented the cause in a masterly manner. This is, however, but the beginning; it is our part to help on the campaign in every possible way. The arguments are plainly and eloquently set forth in the speech as published. We would suggest that each county society consider this subject in executive session, and frame resolutions to be forwarded to the senators from Ohio. Let each member familiarize himself with the arguments and discuss the matter with his clientele, and especially if possible have the daily newspapers comment editorially on the subject so that a public sentiment may be created which will demand the establishment of this Department. Recent occurrences in the House of Representatives show that our representatives seek to follow the will of their constituents even in the face of personal discredit and unpleasantness in Washington; but the will of the people must be plainly expressed. *Vox populi vox dei* is indeed true in politics. We cannot blame our national senators and representatives for failing to carry out our wishes if the latter are not expressed plainly and definitely, for they are not mind readers.

EDITORIAL NOTES

WARREN COUNTY RESOLUTIONS.

The following resolutions offered by B. H. Blair, April 14, 1910, were unanimously adopted by the Warren County (Ohio) Medical Society:

WHEREAS, An awakened profession, intelligently and effectively organized under wise leadership, has by concerted and co-ordinated efforts greatly promoted the interests of scientific medicine in many particulars; but worthy of special mention has been the work of the American Medical Association through the Council on Pharmacy and Chemistry, through whose labors we have seen exposed fraudulent preparations whereby the pro-

fession and the public have been imposed upon by dishonest manufacturers and their agents. This council has likewise been of great service to practitioners by discovering to them proprietaries that are dependable, honestly made and truthfully sold. The discoveries and disclosures made by the council and communicated to the profession through our incomparably valuable journal, have provoked the resentment of mercenary manufacturers, distributors, and a class of publications that live by advertising worthless, along with some worthy, preparations that cater to and impose upon disaffected, unenlightened, and prejudiced members of the profession; and

WHEREAS, The many pamphlets and proprietary publications which the profession receives gratis and in which are to be found sneers, insinuations, charges, and scurrilous attacks upon the character and purposes of our organizations and officials, lend color to the suspicion that there is an organized movement inspired by interests, individuals, and publications (foiled in their purpose to continue to exploit our profession) to weaken, to divide, to distract, and to destroy the influence of the officials and the organs of our organizations and especially of our national association; therefore be it

Resolved, That we, the members of the Warren County Medical Society, hereby declare our appreciation of the splendid organization of the profession in county, state and nation, and of the work accomplished in bettering the condition of medical men everywhere and of mankind in general; and that we desire to express our interest in and sympathy with the purposes, the enterprises, and undertakings of our organizations; and that we record our confidence in the officers and our approval of their conduct of the affairs of our organizations; be it further

Resolved, That we desire especially to record our confidence in and approval of the work of the trustees of the American Medical Association, the Council on Pharmacy and Chemistry, the national organizer, Dr. J. N. McCormack, and the secretary-editor, Dr. George Simmons; be it further

Resolved, That while we accord to all the right to offer suggestions and criticisms with the object of improving the organization and the efficiency of its agencies, that we regard as enemies of the interests of the profession, all medical men and publications who seek to sow the seeds of discord, distrust, suspicion, dissension, and disunion by derisive criticism and scurrilous attacks upon the officials, organs or agencies of our organization and that we also regard such men and publications as allies of those who seek to enslave and to despoil our profession.

RESOLUTION ADOPTED BY THE MONTGOMERY COUNTY MEDICAL SOCIETY, DAYTON, OHIO.

Having read the bill known as S. B. No. 6049, introduced by Mr. Owen in the United States Senate February 1, 1910, same providing for the establishment of a Department of Public Health, and fully realizing that the said bill or measure is to the people of this country of the greatest

vital importance viewed from every human standpoint; therefore be it

Resolved, By the Montgomery County Medical Society in convention assembled, that we do commend the position taken by President Taft in his first message to Congress, in which he recommends that some provision be passed by Congress that will insure up-to-date methods for the solution of the great health problem; that we do most heartily endorse the said Owen bill, and do hereby respectfully urge members of Congress from this state to give same their unqualified support; be it further

Resolved, That a copy of these resolutions be sent to each of our United States Senators, to each member of the House from this state, and to Senator Owen, the author of the bill.

Montgomery Medical Society; by its President, A. C. Hanning; by its Secretary, J. D. Kramer.

At a meeting April 18, the Columbus Academy of Medicine adopted a resolution endorsing United State Senate Bill No. 6049, which would establish a national Department of Public Health. The resolution reads in part:

WHEREAS, The Columbus Academy of Medicine is convinced of the necessity to this country of a Department of Public Health, believing that the health and freedom from disease of our citizens should be placed, at least, on a par with that of domestic animals; be it

Resolved, That the Columbus Academy of Medicine heartily and unqualifiedly endorses Senate Bill No. 6049 to establish a Department of Public Health, and commends the patriotic attitude of Senator Owen in presenting this bill, and that of President Taft in recommending such action in his first presidential message.

A letter from Congressman Taylor, which was read at the meeting, expressed sympathy with the bill and pledged his support. The Academy voted to send a letter to Congressman Taylor, thanking him for his attitude.

PROPOSED CHRISTIAN SCIENCE LEGISLATION IN OHIO.

Remarks of Dr. Charles A. L. Reed before the codes committee of the House of Representatives of the Ohio Legislature, April 20, 1910:

Mr. Chairman: I come before you today to protest against the passage of House bill No. 553. I do so by virtue of several warrants. I come in the exercise of my rights as a citizen of the State of Ohio; I come as a member of the medical profession; as chairman of the legislative committee of the American Medical Association, which represents the great organized medical profession of the United States; and as chairman of the legislative committee of the Academy of Medicine of Cincinnati, being the organized medical profession of Hamilton county, Ohio.

Now, Mr. Chairman, I beg leave to call your

attention to the title and full text of the bill—House Bill No. 553. The bill is short, only sixteen lines, and is as follows:

SEVENTY-EIGHTH GENERAL ASSEMBLY, REGULAR SESSION, 1910—H. B. N*. 553, MR. ZUMSTEIN.

A BILL

Relating to Religious Privileges and Rights of Conscience.

Be it enacted by the General Assembly of the State of Ohio:

Section 1. That all religious organizations duly incorporated under the laws of this state shall be protected by the courts of the state from interference in their mode of worship, and that all members of said organizations shall be protected in the exercise of their religious privileges and rights of conscience, as guaranteed by the constitution of the state.

Sec. 2. That when any minister or member of any religious organization so incorporated under the laws of this state is requested to perform services of a religious nature, for a church or for private individuals, in accordance with the religious teachings of such organizations, it shall be within the rights of such minister or member to perform and receive compensation for such services under the rules of such organization; and the statutes of this state relating to the practice of medicine and surgery shall not apply to such persons merely rendering services according to the religious tenets of such organization, when such persons do not pretend to a knowledge of medicine and surgery, and do not use drugs or instruments.

MISLEADING AND DECEPTIVE

Addressing myself now specifically to the bill I, both in my personal and representative capacities, protest against its passage for several reasons. In the first place, its title, being the declaration of its purpose, is entirely misleading. The title as printed reads, "A Bill Relating to Religious Privileges and Rights of Conscience." Everybody knows and the friends of the measure have admitted here in the hearing that while couched in general terms it seeks to confer special privileges on a particular sect that calls itself religious. If then we read this title in the light of this admission and in the light of the brief and innocent looking text of the measure itself we discover that it is entirely deceptive. The only caption that could possibly express its hidden motive as well as its ulterior purpose, would, therefore, read somewhat as follows: "A bill, (1) to delegate the licensing power of the State of Ohio with respect to the practice of medicine; (2) to authorize a religious denomination to issue licenses to practice medicine to persons who are specified as being ignorant of anatomy, physiology, chemistry, pathology, bacteriology, diagnosis, and all the other subjects and sciences embraced in the general term 'practice of medicine'; and (3) to repeal the medical practice act of the State of Ohio."

UNCONSTITUTIONAL DELEGATION OF POWER

I say that nothing less than this somewhat lengthy title can possibly express the motive and purpose underlying the sixteen lines of text that

follow. I believe that I am well advised on this point when I say that the bill as drawn contemplates a delegation of power in contravention of the express provision of the constitution of the state. This becomes apparent in lines 9 and 10, in which it is provided that the persons who are to enjoy the privilege sought for by the measure must do so "in accordance with the religious teachings of such organizations," to be paid "under the rules of such organization." In other words the privilege of exercising their functions under the licensure here sought, is to be permitted to do so not in accordance with any conditions prescribed by the state. Enforced by mechanism created by the state, all for the welfare and protection of the people of the state, but in accordance with the tenets of a religious sect—of any religious sect—provided only that the members of such sect or sects shall not so much as "pretend to a knowledge of medicine and surgery." This clearly implies a delegation of power within the inhibition of the constitution as shown by the fact that in the licensure of lawyers, physicians, dentists and other professions and occupations, the state exercises this duty by specific legislation. Creating specific agencies with specific powers for specific purposes.

FURTHER EFFORTS AT DECEPTION

The bill is still further objectionable because it tries to mask its purposes by using old words with new meanings without giving those meanings in specific terms. Thus it uses the terms "religious," "privilege," and "right" and "conscience" as if in their ordinary sense, respectively, while as a matter of fact the privileges sought after under this cloak, do not conform to the generally accepted meanings of any of these words. Religion, according to the dictionary, means "any system of faith in and worship of a divine being, or beings, as the Christian religion, the religion of the Jews, Greeks, Hindoos, and Mohammedans." If this is what is meant by the bill, no bill is needed, for the constitution already guarantees that right to everybody. I fear, however, that the promoters of the measure have come nearer than they intended to declaring their real purpose in the use of the word "privilege," which, in law, means "a special and exclusive right, conferred by law on particular persons or classes of persons, and ordinarily in derogation of the common right." That is indeed what is here sought after, although obviously the use of the word was intended to convey the impression that "privilege" is the synonym of "inalienable right," or "that which any one is entitled to have, or to do, or to require from others within the limits prescribed by law." If this is all that is sought for, then there is still no occasion for the bill any more than there is for a joint resolution by the Legislature reaffirming the constitution. Obviously, therefore, something more is implied by the use of these and other words than is ordinarily attached to them in their authorized everyday use. What are these meanings? The Legislature and the people are entitled to know, and they can know only by having the words specifically defined in the text of the bill.

IS IT MASKED SPECIAL LEGISLATION?

Now, Mr. Chairman, I take up another phase of the bill. It is either in the interest of a special

cult—the Christian Scientists—or it is equally in the interest of any other denomination of so-called religionists. I do not care which horn of the dilemma the friends of the measure choose to accept, I shall consider both of them. In the first place, then, let us accept the indisputable admissions of the advocates of the measure here today, that it is intended solely and exclusively to give to the Christian Scientists the right to charge for their services and to collect their fees at law. Of course, if this admission, here made verbally, were actually put into the law, the Legislature would not consider it for a moment for it would be so obviously class legislation as to be flagrantly unconstitutional.

AGAINST PUBLIC POLICY

So the Christian Scientists have been forced to seek their special privilege in general terms. In other words it has been necessary for them to put all religious denominations on a fee charging basis. Of course this is a matter of no concern to reputable ministers of the gospel beyond the fact that it tends to commercialize their profession and is in derogation of the dignity and influence of their sacred offices. But to the so-called curative cults, it has a deep significance and to all quite as much as to any one of them. It means a wide open opportunity to prey upon the people while pretending to pray for them—at so much per prayer, present or absent, according to the schedule. I confess that I have enough of the religious sentiment about me to be shocked by the proposition. But that is sentiment. Let us turn to the practical phase of the situation that is sought by this bill to be imposed upon the people of this state. There is not a single cult, from Dowieism to the Magnetic Healers, from the New Thought people to the dirty Schlatter, from the most honest zealots to the veriest vampires—even to the Holy Rollers—but that would be legalized and professionalized under this proposed law—if only they declared themselves to be a "religious" organization and at an expense of \$2.50 become incorporated as such, as any of them today may do under the laws of the State of Ohio. I defy the advocate of this measure to show me a single feature of it that would inhibit precisely this extension of the license that here is sought. A license to use the name of religion for the practice of medicine by persons who are designated as those who do not "pretend to a knowledge of medicine and surgery."

ATTEMPT TO REPEAL THE PRACTICE ACT.

And this brings me to the point that I made, namely, that this measure is an attempt, in effect to repeal the medical practice act of the state. I was for a number of years a member of the State Medical Board at a time when we registered the physicians of the state and forced something like 800 unqualified pretenders to abandon Ohio as the field of their activities. These people are either here doing nothing in the way of practice or they are in other more hospitable states. Once pass this law and we shall see them suddenly become religious; with a half dozen confederates they will form some kind of a "religious organization"; for two dollars and a half they will become incorporated under some kind of a religious name; and the quacks and scoundrels that we banished will again be proudly going

about in our midst, veritable devils under the cloak of religion, immune from any provision of the law which the people of Ohio have enacted to protect themselves from precisely this species of charlatanism and rapacity. I defy the advocates of this measure to show me a single feature of it that would inhibit precisely the line of activity that I have just indicated. I go further and declare that every natural law, every natural force of social activity must make just such a result an inevitable consequence of the passage of this measure.

IN VIOLATION OF THE USAGES OF NATIONS.

The enactment of this measure would be in violation of the usages of civilized nations. In France, for instance, the members of a great religious denomination have great faith in the curable efficacy of certain shrines. The people are permitted to go there and worship, but in that great country that protects its people from ignorance in the professional treatment of diseases, there is no thought that the ministrations at Lourdes, for instance, shall be on the basis of fees collectable at law. The same is true with respect to a celebrated shrine near Quebec and with respect to certain prayers by certain religionists in Ireland. The priests of Japan and other countries of the Orient assume certain functions as healers, but they have no schedule of prices and they are not professionalized as physicians by the government of that enlightened country. Every civilized country since the middle ages—ages of which this bill is an echo—has sought and is today seeking to advance all professional standards, by placing a premium on science and giving the people the benefit of its latent and best developments, not to legalize persons to treat disease "who do not pretend to a knowledge of medicine and surgery."

In conclusion, I leave the question in your hands, gentlemen of the committee, but in doing so I admonish you of the danger of leaving diseases, contagious and infections and other diseases that become fatal by delay, to be recognized or not by the people who begin by saying there is no such thing as disease, and ending by priding themselves upon the fact that they do not even "pretend to a knowledge of medicine and surgery," and consequently, have neither the disposition or ability to recognize diseases that are dangerous not only to the individual but to the community. I warn you against the sad consequences of this step backward by which the scientific discoveries of the last century—discoveries by which life has been lengthened and disease has been reduced—shall be set at naught and the stamp of approval be placed upon healers of the sick who do not even pretend to a knowledge of medicine and surgery and all that it implies. I ask you most seriously to consider these facts, and the additional fact that under misleading verbiage this bill asks you to delegate powers that the constitution says are not to be delegated; it asks you to violate the established usage of the state with reference to the licensure of vocations; it asks you to license as healers of the sick "persons who do not pretend to a knowledge of medicine and surgery"; and finally, by letting down the bars to ignorance, sham and pretension when marching under the name of religion, it asks you,

in effect, to repeal the medical practice act of Ohio—one of the most beneficent measures, if not the most beneficent measure, for the protection of the health, happiness and lives of the people of this commonwealth.

SPEECH OF SENATOR ROBERT L. OWEN, BEFORE THE U. S. SENATE.

Mr. President, the people of the United States suffer a loss of over 600,000 lives per annum. This terrible loss might be prevented by reasonable safeguards under the co-operation of the federal and state authorities, each within strict constitutional limits.

These deaths are caused by polluted water, impure and adulterated food and drugs, epidemics, various preventable diseases—tuberculosis, typhoid and malarial fevers, and so forth—unclean cities, and bad sanitation.

Measuring the money value of an American citizen at \$1,700, this preventable loss by death is one thousand millions of dollars annually, equal to the gross income of the United States government.

There are 3,000,000 people in the United States on the sick list from preventable causes, of whom 1,000,000 are in the working period of life; about three-quarters of a million actual workers losing on an average of \$700 per annum, an approximate loss from illness of five hundred millions, and adding a reasonable allowance for medicine, medical attendance, special food and care, a like sum of five hundred millions, these losses would make another thousand million dollars of preventable loss to the people of the United States.

ORIGIN OF BILL 6094.

Mr. President, nine years ago I had the importance of this subject called to my attention by an article read before the Cincinnati Academy of Medicine, October 7, 1901, on "Preventable Disease in the Army of the United States—Cause, Effect, and Remedy," by Major William O. Owen, a surgeon in the United States Army, printed in the Journal of the American Medical Association, October 26, 1901, where he pointed out over 19,000 cases of typhoid fever in four camps—Chickamauga, Alger, Meade, and Jacksonville—with 1460 deaths of the finest young men of America, nearly all of which was a preventable loss. The typhoid cases, with resultant deaths, were due to ignoring the laws of sanitation. I drew this bill (S. 6049) in the hope of co-operating with the administration in making effective the most important of all forms of conservation—the conservation of human life—and in the hope of making effective the expressed desires of the numerous associations and societies of the United States who stand for a department of public health.

No man can read the "Report on National Vitality—Its Wastes and Conservation," of the Committee of One Hundred, without being impressed with certain great facts:

1. The thoroughness and scientific care with which it made this report.
2. The stupendous annual loss of life which could be prevented; the immense economic commercial loss and human misery and sorrow due

to preventable illness, inefficiency, degeneration, and death.

3. The wisdom of the means proposed by the Committee of One Hundred for the prevention of this annual loss and for the conservation of the national life and health.

INCREASING LENGTH OF LIFE.

The modern duration of life is widely variant, according to the organized protection of the health of the people by government.

In India the average length of life is twenty-three years, due, not to climatic conditions, but to ignorance, prejudices, and religious superstitions. They will not kill a snake in India, and thousands of inhabitants die annually from the poison of snake bites. In America we die in like manner from typhoid and tuberculosis, because we neglect to suppress the causes of these diseases.

The length of life in India is not increasing because of their lack of progress; but in Geneva, Switzerland, where the country is supposed to be very healthy, the length of life in the sixteenth century was only 21.2; in the seventeenth century, 25.7; in the eighteenth century, 33.6; from 1801 to 1883, 39.7; and it is steadily improving.

THE PROLONGATION OF LIFE.

Scientific hygiene and increased knowledge of the laws relating to health have had a very striking effect upon the prolongation of human life throughout the world.

At present in Massachusetts life is lengthening at the rate of fourteen years per century; in Europe about seventeen years; in Prussia, the land of medical discovery and its application, twenty-seven years; in India, where medical progress is practically unknown, the life span is short, twenty-three, and remains stationary.

It is demonstrated beyond reasonable doubt by the report of the Committee of One Hundred that the average human life in the United States may be, within a generation, prolonged over fourteen years.

This estimate of the prolongation of human life fourteen years is based upon a vast amount of data and is a conclusion justified by the knowledge of the most learned men in the world.

I remind you again of what I pointed out a year ago, that in New Zealand the deaths per thousand per annum is nine and a fraction and in the Australasian states ten and a fraction, while in the United States it is 16.5, a loss of seven to the thousand in the United States in excess of the New Zealand rate—that is, in 90,000,000 people it would exceed 600,000 deaths that could be saved annually in our republic.

YELLOW FEVER.

Mr. President, before the American intervention in Cuba the death rate from yellow fever alone in Havana to the hundred thousand population in 1870 was 300; in 1880, 324; in 1896, 639; in 1897, 428; and after the American occupation it fell: 1900, 124; in 1901, 6; in 1902, zero; in 1903, zero; in 1904, zero.

What a glorious record! What a splendid tribute to the learning, industry, and self-sacrifice of the devoted medical men who accomplished this result, most of whom are now dead. James Carroll and Lazier died from experimental yellow

fever, sacrificing their own lives deliberately in the interest of their fellowman. All honor to their names and to the names of Walter Reed and the others, who, brave, gallant soldiers of peace, exposed their lives for the benefit of their fellows. Monuments of stone and of bronze should be erected to these noble patriots of peace, more noble and self-sacrificing in their work than patriots of war. What does the commerce of the world owe to these men who vanquished yellow fever? There could have been no Panama Canal except for this development of science.

HOOKWORM.

I am informed by a high authority that over 90 per cent of the children of one of the Southern states are afflicted with the hookworm, a preventable disease, curable at a cost of less than 50 cents apiece with two doses of thymol and a little careful treatment, yet the disease is denied, prejudices and lack of learning stand in the way of the speedy restoration of thousands, and the voice of the men who know the habits, life, history, and remedy for hookworm carries with it little power or authority to heal the unlearned patients. Only the power of the state itself, with its dignity and with its authority; only the power of the general government, with its prestige and with its high standing, is competent to impress upon the minds of the unlearned body of the people those principles of hygiene, preventive medicine, and sanitary law which are essential to the preservation of the life of the American people.

The bill which I have introduced is in accordance with the earnest repeated desires of the American Medical Association, probably the largest and most honorable association of physicians and surgeons in the whole world as far as the principle of the bill is concerned. I have an earnest letter from Charles A. L. Reed, M. D., Chairman of the Legislative Committee of the American Medical Association, which I herewith present:

Cincinnati, March 10, 1910.

Hon. Robert L. Owen, United States Senate, Washington, D. C.:

Dear Sir—In compliance with your request for suggestion to be taken up in connection with the hearing on the bill recently introduced by you to create a department with a secretary of health, I beg to reply in my capacity as Chairman of the Legislative Committee of the American Medical Association. In that capacity I have the honor at the same time to request, first, that you avail yourself of an early opportunity, and in your own way, to lay before the Senate the facts which I shall present; and, second, that you arrange at an early date for a hearing on your bill, the vital principle of which is so distinctly in consonance with the interests of the people, as represented by and through the medical profession.

This is shown by the fact that the American Medical Association, through its legislative conference, attended by delegates from thirty-six states and from the army, navy, and the Public Health and Marine-Hospital Service, held at Chicago, March 2, 1910, urged by resolution, as the association has repeatedly urged for nineteen years, "that a bill be passed recognizing the

health interests of the country in the title of a department of the national government, and that within that department there be organized all national health agencies."

The physicians of the country, who, as professional students of the question and as the natural advisors of the people on health questions, and who, consequently, have first knowledge of the subject, have long maintained their present attitude for the following specific reasons:

First. The time has arrived when, under the law of precedent, the health interests of the country ought to pass from their present bureau stage of development to that of a department. This course of evolution was exemplified, first, I believe, in the development of the Department of the Interior, then that of Agriculture, and, finally, that of Commerce and Labor. In each of these instances the antecedent bureaus had existed for periods varying from a few years to a decade or two. The health interests of the country, more fundamental than all, have been left in the form of, successively, a "service," then of a "bureau," for more than a century.

Second. The creation of a department of health is furthermore demanded, first, because sanitary science has demonstrated its ability to conserve the efficiency and prolong the life of the people; and, second, because nothing less than the establishment of a department can have that maximum of moral force and educational influence, that maximum of prestige and effectiveness combined with business-like economy of administration that will enable it to deal with the disgraceful, not to say monstrous, conditions now prevailing in this country.

Third. That a department of health, with the fullness of power and influence that can inhere only in a department and nothing less than a department, is demanded by the conditions to which I have alluded is conclusively established by the fact that, first, about 600,000 people die in this country every year from preventable causes; second, that something more than 3,000,000 more are made ill and idle for variable periods every year from the same cause; and, third, that the annual economic loss from this source alone amounts to more than a billion and a half dollars every year.

Fourth. That nothing less than a department of health, acting in co-operation with the states and in full recognition of their rights and powers, is practicable for the assembling and co-ordinating of the existing health agencies of the government and for their effective, economic, and business-like administration.

Fifth. That nothing less than the creation of a department of health can comprise a fulfillment of the pledge to the people contained in the platform of every political party that appealed to the popular suffrage in the last national campaign.

In view of the foregoing facts and considerations, I have the honor to request that at the hearing on your bill care be taken to give special consideration to the suggestions which I shall enumerate.

Many, if not all of them, have been covered in general terms and some of them in specific terms, in your bill. It has seemed, however, that by

presenting them somewhat in detail in the form of sections to a possible bill, I could facilitate their consideration in consecutive order as follows:

Section 1 ought to provide, as your bill does provide, for the establishment of a department of health under the supervision of the secretary of health, who shall be appointed by the President by and with the consent of the Senate, at a salary of \$12,000 per annum, and who shall be a member of the cabinet of the President, and who shall discharge the duties prescribed in the act.

Section 2 might with propriety provide for the constituent bureaus of the Department of Health as follows:

(a) The Bureau of Hygiene and Preventive Medicine, to which (a) shall be transferred the Laboratory of Hygiene, now located in the Bureau of Public Health and Marine-Hospital Service in the Department of the Treasury, together with all duties, functions, powers, rights, and prerogatives now vested by law in such Laboratory of Hygiene; and it shall be the further duty of the Bureau of Hygiene and Preventive Medicine (b) to co-operate with the respective states, territories, and dependencies in accumulating statistics and other information as to causes and prevalence of disease; (c) to conduct continuous investigation into all sources of danger to human health and life; (d) to formulate rules and regulations for carrying out these provisions, and (e) to publish the records and results of its labors, all under the direction and by the approval of the Secretary of Health.

(b) The Bureau of Foods and Drugs, to which (a) shall be transferred all duties, functions, powers, rights, and prerogatives now devolving by the food and drugs act of 1907 on the Bureau of Chemistry of the Department of Agriculture; and the Bureau of Foods and Drugs shall also (b) supervise the cleanliness and other hygienic and sanitary features of the buildings and products of manufactories, cold-storage plants, and other establishments engaged in the commercial preparation or in the storage of any food product or products whatsoever destined for interstate commerce; (c) establish standards of purity or foods; (d) conduct investigations to determine the best method of preparing foods with reference to the full development of their nutritive value; (e) determine the food value of articles not now generally recognized as foods; (f) establish standards of purity for drugs; (g) make a systematic and exhaustive study of the medicinal flora of the United States and its territories and dependencies; (h) investigate and, where practicable, promote the naturalization and commercial cultivation within the United States, its territories and dependencies, of medicinal flora indigenous to other countries; (i) publish reports of its investigations, activities, and conclusions; and (j) formulate and enforce necessary rules and regulations, all under the direction of the Secretary of Health.

(c) The Bureau of Marine Hospitals, to which shall be transferred the Marine-Hospital Service of the Bureau of Public Health and Marine-Hospital Service of the Department of the Treasury, together with its present personnel and all duties, functions, powers, rights and pre-

rogatives now vested by law in such Marine-Hospital Service, all to be administered under the direction of the Secretary of Health.

(d) The Bureau of Quarantine, to which shall be transferred the quarantine service now located in the Bureau of Public Health and Marine-Hospital Service of the Department of the Treasury, together with its present personnel and all duties, functions, powers, rights and prerogatives now vested by law under such quarantine service, all to be administered under the direction of the Secretary of Health.

(e) The Bureau of Institutions and Reservations, to which shall be transferred all hospitals, asylums, "homes," and infirmaries located in any other department of the government except the Department of War and the Department of the Navy. And there shall likewise be transferred to this bureau the Hot Springs reservation and all other reservations now or hereafter established by the federal government for the conservation of health.

(f) The Bureau of Vital Statistics, to which shall be transferred the Bureau of Vital Statistics now located in the Department of Commerce and Labor, together with its present personnel and all duties, functions, powers, rights and prerogatives now vested by law in such Bureau of Vital Statistics.

(g) The Bureau of Publication and Publicity, which shall (a) publish the reports of the Secretary of Health and all reports, bulletins, and documents of all bureaus of the Department of Health when approved for the purpose by the Secretary of Health, and (b) devise and carry out the most effective means by which information originating in the Department of Health or any of its bureaus may be most widely and effectively disseminated for the information and guidance of the people.

Section 3 might with equal propriety provide that (a) there shall be a medical service of the Department of Health (b) designated by the initials U. S. H. S., meaning "United States Health Service," (c) which service shall consist of (1) a regular medical corps, which shall consist of the United States Marine-Hospital corps, with its present personnel and without other modifications in the law governing the same, or in the regulations enacted in pursuance of such law than may be necessary to comply with the provisions of this act. (2) A special medical corps, which shall consist of all physicians, surgeons, and medical officers now employed in any capacity in and department of the government, excepting in the army and navy, who, subject to the direction of the Secretary of Health, but without having the status otherwise disturbed, shall continue in their present capacity until the expiration of their present tenure, but thereafter all such positions shall be filled by detail from the regular medical corps, which shall be selected in the first instance in accordance with the regulations not less exacting than those which now govern entrance into the Marine-Hospital corps. (d) The Secretary of Health shall, consistently with the provisions of this act, (1) define the grades of health service with due regard to the period of service and efficiency record of its members; (2) prescribe uniforms and insignia for each grade; (3) formulate rules and regu-

lations for the government of the corps, and at his discretion (4) detail any member of the corps for duty in any bureau of the Department of Health, or (5) for duty in any other department on request of the secretary of such department, or (6) for duty in any state, territory or dependency, or in the Panama Canal zone when requested so to do by the proper authority of such state, territory, dependency, or the Panama Canal zone whenever the resources of the service will permit such detail.

Section 4 might further define the duty of the Secretary of Health by stating that in addition to the duties elsewhere prescribed in the act (a) he may, in his discretion, transfer specific duties from one bureau to the other whenever required in the interests of both economy and efficiency; (b) exercise all the functions heretofore exercised, respectively, by the Secretary of the Treasury, the Secretary of the Interior, the Secretary of Agriculture, and the Secretary of Commerce and Labor in connection with any bureau, division, or service transferred by the act to the Department of Health; (c) exercise all duties heretofore exercised by the Secretary of Agriculture in the enforcement of the pure food and drugs act; (d) discharge such other duties as may be prescribed from time to time by the President, and, finally, (e) prepare and submit reports relative to his department embracing suggestions for the improvement of its service, including recommendations for change in personnel, duties, and salaries.

Section 5 might provide (a) that the President be authorized and directed within one year from the passage of the act to appoint an advisory board of health, to consist of six members, two to be appointed for one year, two for two years, and two for three years each, who shall serve without pay, except their traveling expenses, for not more than six meetings annually, and whose functions shall be to confer with and advise the Secretary of Health relative to all questions of policy pertaining to human health and upon other questions at the request of the Secretary of Health; (b) the present consultative arrangement between the present Bureau of Health and representatives of the state boards of health might with propriety be continued between the Department of Health, its Secretary, advisory health boards, chiefs of bureaus, and the representatives of the state boards of health.

Section 6 and succeeding sections might provide in the usual way for the transfer of officers, clerks, employees, property, fixtures, etc.

In asking that you take the foregoing points under special consideration; that the hearing be arranged for the earliest practicable date, and that legislation be reached, if possible, at the present session of Congress, may I ask that you urge upon your colleagues the importance to the people of giving due weight to the conditions to which I have referred?

I have said that over 600,000 of our people die every year from preventable causes. Suppose that our entire army and navy were swept off the earth not once but three times in a year. Would the Congress do anything about it? There are nearly 5,000,000 needlessly ill every year. Suppose that every man, woman and child

in all New York, with Boston and Washington added, were similarly stricken. Would the Congress inaugurate an inquiry? Our losses from these causes amount to a billion and a half dollars every year. Suppose that every dollar appropriated annually for the expense of the government and half as much more were actually burned up and the ashes blown into the sea—Would the Congress take action in the premises?

Our health agencies are scattered, uncorrelated, and unorganized. Suppose that our monetary system were looked after by a dozen or more bureaus in almost as many departments, and that it were responsible for a billion and a half dollars loss every year. Would the Congress be disposed to think that there was possible relationship between the lack of organization and the deficit?

In reiterating the request for an early and full hearing on this question, I beg to emphasize the fact that I do so in behalf of the American Medical Association and in behalf of the interests of the people of the United States as represented by and through the medical profession. And in this behalf and in view of the fact, deducible from our vital statistics, that in this country alone the people are dying from preventable causes at the rate of more than five every minute, may I not venture to suggest that the subject is one of sufficient importance to be entitled to precedence over some other questions that may possibly be engaging the attention of the committee?

Awaiting your early reply, I have the honor to be, very sincerely,

CHARLES A. L. REED,

Chairman of the Legislative Committee, American Medical Association.

P. S.—I beg leave to advise you that I am sending a letter to the same purport, and largely in the same language as this, to Hon. James R. Mann of the House, who has requested suggestions to be considered in committee in connection with the recommendations relative to the public-health clause contained in the President's message.

Mr. President, this bill (S. 6049) co-ordinates and brings into one working body the various health agencies of the government.

It proposes no new officers except the secretary and his assistant, who should be a permanent officer, acting as a director-general. Perhaps such assistant should have this title.

It calls for no new appropriations except the salary of the secretaries.

It will provide a number of economies by preventing duplication, and make more efficient the money expended and the officials employed by the present health agencies of the government.

The co-ordination of these agencies has been approved by President Taft, and the vigorous co-operation of such agencies with the state authorities in stamping out disease has been urged by President Roosevelt.

I quote President Taft and what he said in regard to the work of the Committee of One Hundred in their desire to promote the national health:

"How nearly this movement will come in accomplishing the complete purpose of its pro-

motors only the national legislator can tell. Certainly the economy of the union of all health agencies in the national government in one bureau or department is wise."

President Roosevelt said:

"I also hope that there will be legislation increasing the power of the national government to deal with certain matters concerning the health of our people everywhere. The federal authorities, for instance, should join with all the state authorities in warring against the dreadful scourge of tuberculosis. I hope to see the national government stand abreast of the foremost state governments."

introduced this bill providing for a department and not for a bureau. The reason for a department instead of a bureau is perfectly obvious and perfectly unanswerable.

I reiterate and indorse the five substantial reasons given by Charles A. L. Reed, Chairman of the Legislative Committee of the American Medical Association, and invite special attention to the cogency of the reasons given.

It is generally agreed that these bureaus should all be brought together as one working body. To bring established bureaus under a new "bureau of public health" would be to lower the dignity of the present bureaus by making them the subordinate bureaus of a new bureau, which would be offensive to every bureau so subordinated.

To bring these bureaus under a department would not lower the prestige of a bureau thus co-ordinated with other bureaus under the department, and would, I believe, generally meet the approval of the government officers employed in the various bureaus so co-ordinated, giving them a new dignity by being a distinct branch of a department of public health, through which they could enlarge their efficiency and find better expression and publicity of work done for the public health.

We have had bureaus for one hundred years. They are scattered in eight departments. They have been disconnected and without co-ordination. They have ever been jealous of each other, the one nullifying and hampering the work of another. They have been without a responsible head because of this subdivision and because the chief of the most important of these bureaus, the Surgeon-General of the Public Health and Marine-Hospital Service, can not express an opinion or give information until he has consulted the Secretary of the Treasury.

The Secretary of the Treasury was not selected as a cabinet officer because of his knowledge of the public health, but because he was an expert on finance. At present our cabinet expert on finance directs government activities in controlling bubonic plague, and the board of trade and the commercialized physicians of San Francisco would be more important in his eyes in all human probability than the chief of one of his subordinate bureaus; at all events this was true as to a previous secretary.

BUBONIC PLAGUE ON THE PACIFIC COAST.

When the bubonic plague broke out in San Francisco in 1900 the city Board of Health of San Francisco quarantined the Chinese district. The United States Circuit Judge, on June 15,

1900, influenced by the commercial spirit of San Francisco, declared the city quarantine illegal, gratuitously observing in his opinion:

"If it were within the province of this court to decide the point, *I should hold that there is not and never has been a case of plague in this city.*"

This high authority on bubonic plague would also have decided, "if within the province of his court, that there never would be a case in San Francisco." His judgment in the one case would be as persuasive as in the other.

This opinion of the United States Circuit Judge was followed with an immediate federal quarantine of the State of California, which was the duty of the government officers in charge under the obligation of the United States to the several states of the Union and to the nations of the world. The Marine-Hospital Service officials in San Francisco declared this quarantine.

The Governor of California, the Senators of California, and the commercial bodies of San Francisco immediately suppressed the Marine-Hospital Service, compelled the Surgeon-General to yield, proved a false case, and made it temporarily stand as the truth before the country. They furnished evidence and proved (?) that there was no bubonic plague in San Francisco, notwithstanding the fact bubonic plague was there in sober truth.

The Marine-Hospital Service finally persuaded the Secretary of the Interior to cause an inquiry in January, 1901, through experts of the highest class. This unanswerable authoritative report was made on February 26, 1901, finding numerous cases of bubonic plague in the heart of San Francisco. The United States quarantine law (section 4) required its immediate publication. It was suppressed until April 19, 1901, and until it had been given publicity by the Occidental Medical Times, the Journal of the American Medical Association, the Medical News, and the Sacramento Bee.

Again the commercial interests of San Francisco triumphed over the bureau and compelled the Surgeon-General, the head of the bureau, by an order of his superior officer, the Secretary of the Treasury, to agree to suppress this report, contrary to the obvious moral and sanitary duty of the United States. From that time bubonic plague has widened the area of its terribly dangerous infection from Los Angeles to Seattle, passing from rat to rat and squirrel to squirrel and from these animals to an occasional human being through the agency of the common flea. Various experts of the Marine-Hospital Service, who, immediately after the report of 1901, discovered the infection outside of San Francisco and reported the truth, were by some strange fatality shortly after their several reports removed from such duty faithfully performed and sent to the ends of the world—to Honolulu, to Ecuador, and so forth.

It is a most interesting history, the details of which might with propriety be given to the Senate as showing the destructive power commercial interests can exert over the faithful servants of a subordinate bureau.

The point I wish to emphasize is that the bureau dealing with public health was easily

suppressed by commercialism and its supposed interests, putting in jeopardy the national health, the national honor, and the national wealth, and the treasury required to withhold and suppress the truth in violation of section 4 of the quarantine laws of the United States.

In 1908 we expended for the suppression of plague, \$228,337.22; in 1909 we expended for the suppression of plague, \$337,403.13; for 1910 we appropriated \$750,000 and \$187,771 unexpended balance—in all, \$937,771—for the prevention of epidemics of cholera, typhus and yellow fever, smallpox, and bubonic plague (called also Chinese plague or black death). All of this appropriation was really needed for bubonic plague, which was the only epidemic seriously threatening the United States. Fortunately, we have \$724,000 of this on hand. So, from no danger, Mr. President, in 1901, 1902, and 1903, the danger grew to the request for an appropriation of over \$900,000 in 1910. There has been over a million dollars appropriated and the plague has not been suppressed. The bureau was prevented from giving publicity to the truth, and Mazatlan, Mexico, was infected in consequence of not sufficient precaution.

OUR INTERNATIONAL OBLIGATIONS.

A department of public health is absolutely essential in order to deal with this matter and with similar questions with the full power and dignity of this government, and in order to faithfully and honorably comply with the state and international sanitary obligations of the United States.

The first article of the first title of the International Sanitary Convention of Paris, 1903, with Germany, Austria-Hungary, Belgium, Brazil, France, Spain, Great Britain, Greece, Italy, Luxembourg, Montenegro, the Netherlands, Persia, Portugal, Roumania, Russia, Servia, Switzerland, Egypt, and the United States, is as follows:

"Article I. Each government shall immediately notify the other governments of the first appearance in its territory of authentic cases of plague or cholera."

Particulars are required, constant information provided, and preventive measures showing the opinion of the experts of every nation as to the extreme importance of protecting the world against bubonic plague.

Yet our Marine-Hospital Bureau was prevented from making the truth known, and even in its publications made its notice as obscure as possible for several years. The bureau understood the importance of publishing the truth; the bureau desired to tell the truth, but it was suppressed. I refer to this painful history not to criticise the unhappy, miserable, and weak bureau, but to point out the fatal weakness of a subordinate bureau as compared with the dignity and power of a department.

OBLIGATIONS TO AMERICAN REPUBLICS.

The first general International Sanitary Convention of the American Republics, held at the Willard Hotel, Washington, December 2-4, 1902, adopted resolutions of the delegates providing a provisional program and emphasizing the sanitary convention adopted by the Second International Conference of the American States held in the

City of Mexico, October 22, 1901, to January 22, 1902.

The convention of January 22, 1902, approved by the duly authorized delegates of the United States, Mexico, Bolivia, Colombia, Costa Rica, Chile, Dominican Republic, Ecuador, Salvador, Guatemala, Haiti, Honduras, Nicaragua, Peru, and Uruguay, pledged the representative governments to co-operate with each other toward maintaining efficient and modern sanitary conditions, and provided:

"That each and all of their respective health organizations shall be instructed to notify promptly the diplomatic or consular representatives of the republics represented in this conference of the existence or progress within their several respective territories of any of the following diseases: Cholera, yellow fever, bubonic plague, and any other serious pestilential outbreak.

"That it shall be made the duty of the sanitary authorities in each port prior to sailing of the vessel to note on the vessel's bill of health the transmissible diseases which may exist in such port at that time."

The Surgeon-General of the United States Public Health and Marine-Hospital Service was president of the convention at Washington of December 2, 1902. Mexico not having been properly advised of the existence of bubonic plague at San Francisco, as agreed by the international convention of January 22, 1902, Mazatlan was infected, because of such failure of the officers of the United States to honorably comply with this convention.

The apology made for our conduct in this matter by Edward Liceaga, president of the superior board of health of the Republic of Mexico (see report, 1903-4, on Public Health, p. 11), says:

"The authorities of San Francisco Cal., fearing that the quarantine restrictions would perhaps impose on their commerce a closure of foreign ports, had carefully concealed the existence of plague and had given clean bills of health to ships leaving that port."

This infection of Mazatlan in December, 1902, took place nearly a year after the United States was bound by the sanitary convention of January 22, 1902, at Mexico City, to give Mexico notice.

What apology shall we offer other nations for such a violation of our international obligations to Mexico? What shall we say to Peru, Colombia, Chile, and the other American republics for this gross breach of public faith?

Will they be content when we say this matter was in the care of a subordinate little bureau, which was thoughtlessly overruled by a secretary not in sympathy with such a subject-matter? What shall we say to the state boards of health of Texas, Indiana, Colorado, and other state boards that demanded the report of the experts of the Marine-Hospital bureau, and were denied the truth as to the bubonic plague in California?

Mr. President, a miserable bureau will not do! It has been tried in the balance and found wanting.

The importance of the subject-matter, the dignity and honor of the United States, its international agreements, and the health and welfare

of the world demand a department and a Secretary of Public Health.

TUBERCULOSIS.

Mr. President, Frederick L. Hoffman, statistician of the Prudential Life Insurance Company (Statistical Laws of Tuberculosis, American Medical Journal, 1904), estimates the commercial loss per annum to the United States from tuberculosis alone at \$240,000,000.

Collier's editorial ("Expressed in Money," July 25, 1908) estimates the loss from tuberculosis alone at \$330,000,000 per annum, and says: "Is it any wonder, then, that the best physicians are heart and soul engaged in the study of its prevention?"

Mr. Hoffman ("Physical and Medical Aspects of Labor and Industry," Annals of the American Academy of Political and Social Science, May, 1906) endeavors to establish the approximate measure of the social and economic value of life, and estimates that fifty active years of a workingman's life represents a total of \$15,000. If death should occur at the age of 25, the economic loss to society would be \$13,695; at 35, \$10,395; at 50, \$4,405.

Mr. President, I doubt if any member of the Senate would regard this measure of economic value as excessive, yet this estimate would make our preventable death loss equal an annual charge of over \$6,000,000,000.

The annual loss from tuberculosis is a hundred and fifty thousand lives to the United States at the average age of 25 years, a terrific social and economic loss.

Most of this loss could be avoided.

SAVING OF LIFE IN NEW YORK.

I submit a table of the department of health of the city of New York, showing the general death rate from 1886 to 1908, improving from 25.99 to 16.52 per thousand, nearly ten to the thousand and an improvement of nearly 40 per cent. (Exhibit 2.)

The tuberculosis death rate has improved from 4.42 to the thousand to 2.29 to the thousand, a like improvement.

In Paris the death rate from tuberculosis is twice as great, but, Mr. President, death from tuberculosis in Greater New York alone in 1908 was 10,147 persons, and from all causes 72,072. (Exhibit 3.)

The vast improvement which has been made in the saving of life is clearly shown from the tables to which I call the attention of the Senate. (Exhibit 4.)

I submit, also Table No. 3, showing a great improvement in the death rate of children under one year of age during the summer months, from 1891 to 1909, in which the death rate has been decreased one-half. (Exhibit 5.)

I submit Exhibit No. 6, the method of the department of health, in controlling tuberculosis.

I particularly desire to submit to the Senate for their physical inspection certain maps showing the number of cases of tuberculosis in certain downtown sections of New York City, in the Cherry and Market Street quarter, and Cherry and Pearl Street neighborhood, and the immense improvement obtained by a few years of effort. (Exhibits 7, 8, and 9.)

You will observe that in one house as many

as twenty-two cases of tuberculosis are reported. Such a section of a great city may be properly described as a charnal house, where the poor are denied a fair opportunity of life by the grinding processes of unthinking commercial energy and power, and are dying by thousands when they might be saved to the great economic gain of the United States, to the great financial and commercial advantage of this nation. I do not make an appeal on the basis of humanity and patriotism alone, but I put it upon the cold basis that ought to appeal to the commercial instinct of the nation, even if it seems to have forgotten the value of human life and of human happiness.

PRESENT COST OF HEALTH AGENCIES OF UNITED STATES.

The United States made appropriations for the present fiscal year for sanitary and health purposes in the following amounts, as nearly as I can ascertain:

Department of Commerce and Labor	\$533,000 00
Navy	1,827,428 00
War	6,400,734 00
Treasury	2,512,733 00
Interior	1,748,350 00
Agriculture	1,275,820 00
State	3,405 79
Bureau of Public Printer.....	7,270 00
District of Columbia.....	663,680 00
Total.....	\$14,972,320 79

A total of nearly fifteen millions. This does not include the service in the Philippine Islands, Porto Rico, nor Cuha, nor 114 physicians, nor 28 nurses among the Indians, nor the one hundred and odd clerks in the medical division of the Pension Office, nor the medical attention to sick prisoners, nor for the collection of medical statistics by the Census Bureau.

There appear to be over 12,000 persons employed in this service, not including those engaged in Porto Rico, Cuba, Panama, the Philippines, nor in the Agricultural Department.

These agencies ought to be consolidated in one bureau. It meets the best opinion in the United States.

The people of the United States are ready to support a department of public health and will indorse this general policy of concentrating all of the health agencies of government. "A department of public health" has been indorsed by the National Grange (Des Moines, 1909); by the American Federation of Labor, with about 2,000,000 members; by the American Medical Association, with about 80,000 physicians and surgeons affiliated; by the National Child-Labor Committee; by the Conference of Governors; and in one form or another by every political platform.

The Republican platform for 1908 says: "We commend the efforts made to secure greater efficiency in national public-health agencies and favor such legislation as will effect its purpose."

The Ohio Republican platform of this year declared in favor of "The organization of all

existing national public-health agencies into a single national public-health department."

In Connecticut and other states similar declarations have been made.

The Democratic platform in 1908 in like manner states: "We advocate the organization of all existing national public-health agencies into a national bureau of public health, with such power over sanitary conditions connected with factories, mines, tenements, child labor, and such other conditions, connected within jurisdiction of federal government—and which do not interfere with the power of the states controlling public-health agencies."

The Committee of One Hundred of the American Association for the Advancement of Science and the American Medical Association, with 80,000 members, advocate a plank in a national platform in sentiment as follows:

"Believing a vigorous, healthy population to be our greatest national asset, and that the growth, power, and prosperity of the country depends primarily upon the physical welfare of its people and upon their protection from preventable pestilences of both foreign and domestic origin and from all other preventable causes of disease and death, including the sanitary supervision of factories, mines, tenements, child labor, and other places and conditions of public employment or occupation involving health and life, we advocate the organization of all existing national public-health agencies into a national department of public health, with such powers and duties as will give the federal government control over public-health interests not conserved by and belonging to the states, respectively."

THE CONSERVATION OF LIFE, HEALTH, AND EFFICIENCY.

Mr. President, I believe in the conservation of our natural resources—of our coal fields, oil and gas fields, water powers, forests, and mines; the development of our natural resources in establishing good roads and improving our waterways.

The conservation of these great natural resources of our national wealth is of great importance, but the conservation of the life of our people is of far greater importance, and the conservation of the vitality and efficiency of our people is a problem of the first magnitude, demanding immediate intelligent attention.

I earnestly invite the Senate to consider Senate Bill No. 6049 and the report on national vitality, by the Committee of One Hundred on National Health, which has been published as a Senate document and which gives in a compact form the essential principles relative to this matter, an abstract and summary of which I insert as Exhibit 1.

Under a Department of Public Health these problems can be worked out with far greater efficiency. The co-operation of the authorities of the several states of the Union and of the municipalities of the several states, each one operated along the lines of constitutional propriety, can be established by a Department of

Public Health with much greater efficiency than through a subordinate bureau.

Indeed, under a subordinate bureau such co-operation is impracticable. The bureau has not sufficient dignity or power in an emergency. It has no national standing. It can not take the initiative, but must always stand subject to the orders of a secretary too greatly influenced by mere apparent commercial and fiscal interest. A bureau of public health so controlled is pitiful, if not despicable, as an agency of an enlightened nation.

Mr. President, I present this matter to the Senate with no pride of authorship, because I deserve no credit in that respect, and am perfectly willing to assist a bill drawn by any other Senator which shall better accomplish the purposes which I have at heart.

I realize that my colleagues are intensely pre-occupied with the multitude of demands upon their time and attention.

But this is a question of vast national importance. In eight years we have increased our expenditures over the average of preceding years by the huge sum of one thousand millions for the army and navy, and are spending 70 per cent of the national income to cover the obligations of past wars and the preparation for possible future war, or about seven hundred millions per annum. But for war on preventable disease now costing us infinite treasure in life, efficiency, and commercial power and prestige, we spend nothing and do not even employ the agencies we have in an efficient manner.

In the name of the people and in the name of the American Medical Association, whose members are the faithful and self-sacrificing guardians of the health of our people, and in the name of the Committee of One Hundred, of the American Federation of Labor, of the National Grange, and of the various health boards of the forty-six states of the Union, and of the great body of learned men desiring improved sanitation and the application of the improved agencies of preventing disease, disability, and death, I pray the Senate to establish a department of public health.

The principle of the bill meets the general approval of the public-health societies and of the medical associations of the United States, and there should be no difficulty in perfecting this bill and in impressing upon the country the importance of organized effort to control the ravages of tuberculosis, typhoid and malarial fevers, bubonic plague, and other preventable diseases, which inflict such enormous injury upon the people of the United States, impose such vast, but needless, human misery and pain, with great financial loss and loss of prestige and power.

A commercial nation will not be unmindful of the commercial value of the saving of life and efficiency possible, which is worth \$3,000,000,000 per annum.

A humane nation will not fail to act when it is known that we could save the lives of 600,000 of our people annually, prevent the sickness of 3,000,000 of people per annum, that now

suffer from preventable disease, and greatly abate the volume of human pain, misery, and death.

I trust, Mr. President, that the Senate may not fail to take action in regard to this matter at the present session.

THE NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS.

The National Confederation of State Medical Examining and Licensing Boards will hold its twentieth annual meeting at St. Louis, Mo., on Monday, June 6, 1910, in the Southern Hotel.

The subjects to be taken up at this meeting will be a consideration of practical clinical instruction in medical colleges, a report on medical education in the United States by a representative of the Carnegie Foundation, and a report on a proposed materia medica list to examining boards, medical schools and the profession. The contributors of papers to the symposium on clinical instruction are men of the highest standing in the medical profession, many of them teachers in some of the foremost institutions in this country, and their productions will be worthy of the most careful consideration. The chief object of this symposium is to determine, as far as possible, whether clinical instruction in medical schools can be made sufficiently practical and thorough so as to warrant the medical boards in demanding practical examinations in the principal branches of the medical course.

An earnest and cordial invitation to this meeting is extended to all members of state boards, professors and teachers in medical schools, and all others interested in securing the best results in medical education.

The officers of the Confederation are: President, A. Ravogli, M. D., 5 Garfield Place, Cincinnati, Ohio; Secretary, Murray Galt Motter, M. D., 1841 Summit Place, N. W., Washington, D. C.

In the presence of a movable sausage-shaped mass in the abdomen, with a history of chronicity, it is well to think of the possibility of its being a case of hyperplastic tuberculosis of the intestine. This diagnosis will be rendered more likely if there are definite signs in the lungs.

The presence of a tumor of the sigmoid flexure with symptoms of chronic obstruction does not always indicate a cancer. Such a condition may be due to a "diverticulitis."

A fecal fistula may be made to heal more quickly by the application of the actual cautery.

THE TOLEDO MEETING

Eight years have elapsed since the last meeting in Toledo, and the recollections of that occasion will serve to mark a contrasting picture of the progress of the State Association.

That meeting was the last of the Ohio State Medical Society. It was a good meeting, an unusually large one, owing partly to the interest in the proposed plan of reorganization. There were somewhat over four hundred members in attendance; twenty-four papers were read and three special addresses presented. It was socially a most enjoyable occasion; our Toledo hosts were untiring in their efforts to entertain the Association.

This year, however, a thousand members are expected to be present; nine special addresses will be presented, ninety-seven papers and case reports will be read before the six sections, very important matters will be brought up before the House of Delegates, and unusual features for entertainment are being prepared.

This will be a very important meeting, so let every member arrange, if possible, to be present.

Toledo is beautifully situated topographically, and is well worth the visit aside from the special medical attractions of the meeting. Its magnificent harbor, enormous docks, glass, automobile and other manufacturies, splendid hotels and office buildings, parks, etc., make it a place of interest to the sight-seer. Its fine hospitals, state, city and private, and its medical college will appeal strongly to our profession.

It is readily accessible from nearly every part of the state by railroads and interurban cars, and every arrangement for the comfort and convenience of visitors has been made by the local committee.

HEADQUARTERS.

The headquarters of the Association will be in the magnificent new Hotel Secor. This is centrally located and may be reached from the union station by the cars marked "Cherry Street." The registration office will be opened here at 9 o'clock Wednesday morning and continue until noon. At 1 p. m. it will reopen at the Y. M. C. A. building and continue there during the remainder of the session. The office will be open daily from 9 a. m. to 12 noon, and from 1 p. m. to 5 p. m.

The following hotels with rates are recommended to visiting members of the Association. These hotels are all within easy reach of the meeting places.

From the union station the cars marked "Cherry Street" reach practically all the hotels.

PLACES OF MEETING.

All section meetings and the Thursday general session will meet in the Y. M. C. A. building.

This building is centrally located on Michigan street opposite the court house and within easy walking distance of most of the hotels. Cars passing Hotel Secor going east on Jefferson avenue and marked "Bancroft Belt," or "Indiana and Stickney," take one direct without change.

The first general session will be held in the ball room of the Hotel Secor on Wednesday morning. The House of Delegates will meet in this same room throughout the session.

The exhibits will be in the Hotel Secor.

This arrangement separates entirely the scientific and business proceedings so that they need in no way conflict. The program is arranged so that the meetings of the House do not occur at the same time as the sections, but more or less confusion is inevitable if the meeting places are the same or too adjacent.

The meeting rooms have been selected with care and it is believed are thoroughly adapted for the purposes in view.

SPECIAL ADDRESSES.

There will be several special addresses this year which promises much of interest and ought to prove a great attraction.

At the first general session on Wednesday morning, after the address of the President, Dr. Willard J. Stone of Toledo, will present a paper of great interest at this time, "The Principles of Medical Defense as Applied to the Ohio State Medical Association."

Dr. G. L. de Schweinitz will address the Eye, Ear, Nose and Throat Section Wednesday evening. Dr. de Schweinitz is too well known to need further comment. His address will surely be scholarly, scientific and of great interest to the section.

Dr. A. W. Hewlett is Dock's successor at the University of Michigan. He has been doing excellent work as Professor of Internal Medicine, and will undoubtedly present a valuable and attractive address.

Dr. F. C. Wood of New York City, has established an enviable reputation as a pathologist and practical laboratorian. His subject is a most apt one, and Dr. Wood will doubtless present it in his usual graphic and vivid manner.

These two addresses will be made Wednesday afternoon before the Medical Section.

Dr. F. R. Hagner of Washington, D. C., who will address the section on genito-urinary surgery



Wednesday afternoon, is a former interne in Johns Hopkins Hospital, and associated there for a time with Dr. Hugh Young. He is a forcible speaker and with his proposed demonstration will be a great attraction for this section.

On Thursday morning Dr. G. W. Wende of Buffalo, and Dr. L. J. Hirschman of Detroit, eminent men in their specialties, will address this same section. The former will illustrate his re-

marks by the stereopticon. Both are widely and favorably known, and their presence cannot fail to add greatly to the interest of the meeting.

The general session on Thursday afternoon should be a record breaker in attendance. At this meeting will be heard Dr. J. M. Anders of Philadelphia, Pa., on Medicine, Dr. J. F. Binnie of Kansas City, Mo., on Surgery, and Dr. Hugh T. Patrick of Chicago, on Nervous and Mental Dis-

RATES OF HOTELS IN TOLEDO

THE BOODY HOUSE, ST. CLAIR STREET AND MADISON AVENUE.
(Accommodates 400)

American Plan—\$2.50 to \$3.00 per day, for rooms without bath. Each person.
American Plan—\$3.50 to \$4.00 per day, for rooms with bath. Each person.
Single Meals, 75 cents.
European Plan—\$1.00 to \$2.50 per day, each person.

THE JEFFERSON HOTEL, CORNER JEFFERSON AVENUE AND ST. CLAIR STREET.
(Accommodates 200)

American Plan—\$2.00 to \$2.50 per day, each person for rooms without bath.
American Plan—\$2.50 to \$3.00 per day, each person for rooms with bath.
Single Meals, 50 cents

THE SOUTHERN HOTEL, CORNER JEFFERSON AVENUE AND ST. CLAIR STREET.
(Accommodates 150)

American Plan—\$2.00, \$2.50 and \$3.00 per day.
European Plan—\$0.75, \$1.00 and \$1.50 per day.
Single Meals, 50 cents

THE ST. CLAIR HOTEL, CORNER OF MONROE AND ST. CLAIR STREETS.
(Accommodates 200)

American Plan—\$2.00, \$2.50 and \$3.00 per day each person.
European Plan—\$0.75, \$1.00 and \$1.50 per day each person.
Single Meals, 50 cents

THE WAYNE HOTEL, CORNER JACKSON AVENUE AND ST. CLAIR STREET.
(Accommodates 300)

European Plan—\$0.75, \$1.00, \$1.50 and \$2.00 per day each person.
(Two or more persons in each room.)
European Dining Room.

THE NIAGARA HOTEL, MADISON AVENUE AND SUMMIT STREET.
(Accommodates 300)

European Plan—\$0.50, \$0.75 and \$1.00 each person for rooms without bath.
European Plan—\$1.50 per day each person for rooms with bath.
(According to location of room—two or more persons to a room.)
Single Meals, 35 cents each, or A la Carte.

THE SCHUCHMAN HOTEL, SUMMIT AND CHERRY STREETS.
(Accommodates 75)

American Plan—\$1.25 to \$1.50 per day for each person.
European Plan—\$0.75 and \$1.00 per day for each person.

THE ST. JAMES HOTEL, SUMMIT AND LOCUSTS STREETS.
(Accommodates 150)

American Plan—\$1.50 per day each person.

MERCHANTS HOTEL, ST. CLAIR AND PERRY STREETS.
(Accommodates 100)

European Plan—\$0.50, \$0.75 and \$1.00.

TAVERN, ST. CLAIR STREET BETWEEN MADISON AND ADAMS.
(Accommodates 100)

European Plan—\$1.00 to \$2.50 a day each person.

PARK HOTEL—KNAPP STREET, ONE BLOCK FROM UNION DEPOT.
(Accommodates 75)

European Plan—\$1.00 to \$2.50 a day for each person.

MEYERHOF HOTEL, KNAPP STREET AND BROADWAY.
(Accommodates 50)

European Plan—\$1.00 to \$2.00 a day each person.

HOTEL SECOR, JEFFERSON AVENUE BETWEEN ST. CLAIR AND SUPERIOR.
(Accommodates 400)

\$1.50 room without bath will cost one person.....\$2.50, or two....\$1.25 each
\$2.00 room without bath will cost one person.....3.00, or two....1.50 each
\$2.50 room without bath will cost one person.....3.50, or two....1.75 each
\$2.00 room with bath will cost one person.....3.50, or two....1.75 each
\$2.50 room with bath will cost one person.....4.00, or two....2.00 each
\$3.00 room with bath will cost one person.....4.50, or two....2.25 each
\$3.50 room with bath will cost one person.....5.00, or two....2.50 each
\$4.00 room with bath will cost one person.....5.50, or two....2.75 each
\$4.50 room with bath will cost one person.....7.00, or two....3.50 each
For each additional person in room, \$1.00, \$1.50 and \$2.00 extra.

THE PATTERSON RESTAURANT IN THE SPITZER BUILDING, MADISON AND HURON.

eases. The reputation of these men as speakers and their eminence in the profession are so well known as to draw widely from all over the state; this opportunity is exceptional, and illustrates what efforts are being made to make this meeting a great success.

ENTERTAINMENTS.

A play written by Dr. Dan Millikin of Hamilton, will be presented at the Zenobia Theater, corner of Jefferson and Michigan avenues, on Wednesday evening. We all know the original genius of Dr. Millikin and can look forward to this event with great pleasure.

After the performance a smoker will be given by our Toledo hosts at the Boody House, Madison avenue and St. Clair street.

Thursday evening the annual banquet will be held at the Hotel Secor, and the character of this hotel promises an unusual epicurean function, for which the Attic salt will doubtless be provided in full measure by some of our best speakers.

It will aid the committee very greatly in providing the proper seating arrangements, and also the hotel management in arranging for service, if the tickets are bought promptly. Therefore come prepared to go to the banquet and buy your ticket as soon after your arrival as possible.

In between the sessions the members will find it a great convenience as well as a source of pleasure to avail themselves of the cordial invitation of the Business Men's Club in the Nicholas building.

On Wednesday evening the newly organized Alumni Society of the Jefferson Medical College will have a smoker at the Business Men's Club; this will be an enthusiastic reunion of old "Jeff" men and every loyal son should make an effort to be present.

Clinics at the local hospitals are being arranged for Tuesday the tenth, and Saturday the fourteenth, to which all are invited.

The ladies will also be well looked after. On Wednesday afternoon they will be given an automobile ride with a reception and tea at the Toledo Yacht Club. On Thursday afternoon another automobile ride will be given up the beautiful valley of the Maumee with tea at the Country Club.

THE SIXTY-FOURTH ANNUAL MEETING OF THE OHIO STATE MEDICAL ASSOCIATION, MAY 11, 12, 13, 1910, AT TOLEDO.

COMMITTEES.

Executive—J. G. Keller, M. D., President Toledo Academy, Chairman; C. N. Smith, M. D.,

H. H. Heath, M. D., C. D. Selby, M. D., J. A. Duncan, M. D., J. A. Wright, M. D., G. M. Todd, M. D., G. L. Chapman, M. D.

Finance—C. D. Smith, M. D., Chairman.

Entertainment—G. L. Chapman, M. D., General Chairman.

Hotels—Jeremiah Metzger, M. D., Chairman.

Meeting Places—S. D. Foster, M. D., Chairman.

Exhibits—G. H. Jones, M. D., Chairman.

Entertainment—W. W. Coldham, M. D., Chairman.

Ladies Entertainment—H. H. Heath, M. D. Chairman.

Publicity—C. D. Selby, M. D., Chairman.

Registration—J. A. Duncan, M. D., Chairman.

Reception—J. A. Wright, M. D., Chairman.

Clinics—G. M. Todd, M. D., Chairman.

REGISTRATION.

Each member in attendance shall enter his name on a registration card indicating the component society of which he is a member. When his right to membership has been verified, he shall receive a badge, which shall be evidence of his right to all the privileges of this session. No member or delegate shall take part in any of the proceedings of this session until he has complied with these provisions. Only bona fide members will be admitted to entertainments.

Registration will be at the Hotel Secor, until 1 o'clock May 11, when it will be moved to the Y. M. C. A. building, where all scientific meetings are to be held.

PAPERS.

No address or paper before the Association, except those of the president and orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor, except by unanimous consent, more than once on any subject.

All papers read before the Association shall be its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

PLACE OF MEETING—HEADQUARTERS.

Hotel Secor has been made headquarters for the Association during the meeting.

The Association will first convene in a general meeting in the ball room on Wednesday morning at 9:30. Subsequently the scientific sessions of the sections will be held in the Y. M. C. A. building on Michigan street, opposite the court house.

The House of Delegates will meet throughout in the ball room of the Hotel Secor. The exhibits will be on view in this hotel.

The Y. M. C. A. building is within easy walk-

ing distance, but cars passing Hotel Secor going east on Jefferson avenue, marked "Bancroft Belt," or "Indiana and Stickney," will take you to it without change.

PROGRAM.

GENERAL SESSION, MAY 11, 9:30 A. M.

HOTEL SECOR BALL ROOM.

Civic Address of Welcome, Hon. Brand Whitlock, Mayor.

Address of Welcome, Academy of Medicine, Wm. A. Dickey, M. D.

President's Address, W. H. Snyder, M. D., President.

Special Address—"Medical Defense for Members of the Ohio State Medical Association," Willard J. Stone, M. D.

MEETING OF THE HOUSE OF DELEGATES.

Call to order at 11 a. m.

Miscellaneous business.

Nomination and election of nominating committee.

Reports of officers—

Treasurer.

Secretary.

Reports of committees—

(1) Public Policy and Legislation.

J. W. Clemmer M. D., Chairman.

(2) Publication.

J. H. J. Upham, M. D., Chairman.

(3) National Legislation.

B. R. McClellan, M. D., Chairman.

WEDNESDAY, 1:30 P. M.

SECTION MEETINGS.

(See Section program, page 285)

WEDNESDAY, 7 P. M.

MEETING OF THE HOUSE OF DELEGATES.

HOTEL SECOR BALL ROOM.

Call to order at 7 p. m.

Reports of councilors.

Amendments to the Constitution.

Miscellaneous business.

WEDNESDAY, 7:15 P. M.

Y. M. C. A.

"Report of the Committee for the Prevention of Venereal Diseases," Charles Melvin Harpster, M. D., Secretary.

Meeting of the committee and discussion of subject.

All members of the State Association and their guests are invited to attend this session if they so desire.

Discussion by Wells Teachnor, Chairman, Columbus; M. L. Heidingsfeld, Cincinnati; W. I.

LeFevre, Cleveland; A. Ravogli, Cincinnati; Robert S. Walker, Toledo; William Lower, Cleveland; E. O. Smith, Cincinnati; Starling S. Wilcox, Columbus.

EYE, EAR, NOSE AND THROAT SECTION.

WEDNESDAY, 8 P. M.

Y. M. C. A.

Address by George Lord de Schweintz, M. D., Philadelphia, "Concerning Some Ocular Manifestations of Cardio-Vascular and Renal Diseases." (Illustrated by stereopticon.)

WEDNESDAY, 8:15 P. M.

A Medical Comedy in One Act, written by Dan Millikin, M. D., and given under his direction. For members and their ladies. Zenobia Theater is on Jefferson avenue at the corner of Michigan, four blocks west from Hotel Secor.

10 P. M.—Smoker for the gentlemen at the Boody House, Madison avenue and St. Clair street.

8 P. M.—Smoker of Jefferson Alumni Society at Business Men's Club.

THURSDAY, MAY 12, 9 A. M.

SECTION MEETINGS.

(See Section program, page 285)

THURSDAY, 1:30 P. M.

MEETING OF THE HOUSE OF DELEGATES.

HOTEL SECOR BALL ROOM.

Call to order.

Report of nominating committee an election of officers and committees.

Selection of date and place of next meeting.

Miscellaneous business.

THURSDAY, 2:30 P. M.

GENERAL MEETING.

Y. M. C. A.

Address in Medicine—"Pleuritis as a Complication and Sequel of Lobar Pneumonia, Its Significance and Treatment," James M. Anders, M. D., Professor of Medicine, Medico-Chirurgical College, Philadelphia, Pa.

Address in Surgery—"Trivialities and Progress," John F. Binnie, M. D., of Kansas City, Missouri.

Address on Mental and Nervous Diseases—"Differential Diagnosis of Functional from Organic Diseases of the Nervous System," Hugh T. Patrick, M. D., Chicago, Ill.

THURSDAY, 7 P. M.

Annual banquet, Hotel Secor.

FRIDAY MORNING, MAY 7, 9 O'CLOCK.

SECTION MEETINGS.

(See Section program, page 285)

SECTION MEETINGS.

WEDNESDAY, 1:30 P. M.

MEDICAL SECTION.

Y. M. C. A.

(1) "Diagnosis and Treatment of Early Tuberculosis," John P. DeWitt, M. D., Canton. Discussion, C. B. Conwell, M. D., Mt. Vernon.

Abstract: The value of early diagnosis. Methods of diagnosing pulmonary tuberculosis in its incipency. The ultimate aim of treatment in tuberculosis is to produce immunity. Discussion of immunization by hygienic treatment and immunization produced by the administration of tuberculin.

(2) "Report of Two Cases of Heart Block," L. C. Grosh, M. D., Toledo. Discussion, J. E. Greiwe, M. D., Cincinnati.

(3) "Laryngeal Ulcerations Following Intubation," J. McI. Phillips, M. D., Columbus. Discussion, Thomas Hubbard, M. D., Toledo.

Abstract: Severe ulceration occurs in about three per cent of cases with equal frequency in both sexes, and is most common between the first and sixth year. The ulcers are caused by pressure of the tube on inflamed structures and are on the anterior surface of the larynx, just under the cricoid and thyroid cartilages, beginning in its mucous membrane. The cartilages are finally destroyed. It is difficult to diagnose from other cases of prolonged intubation. In some cases the symptoms do not arise for several days after extubation. The pathognomonic symptom in advanced cases is the repeated expulsion of the tube, followed by a prompt dyspnoea or apnoea. The prognosis is grave. Treatment. Illustrative case reports. Summary of cases.

(4) "Report of an Interesting Case of Cirrhosis of the Liver," E. W. Mitchell, M. D., Cincinnati. Discussion, George A. Fackler, M. D., Cincinnati.

Abstract: A young lady, twenty-six years of age, complained of no illness, except lassitude and want of endurance until about the middle of October, when family observed that she was jaundiced; during last two weeks of life, liver shrinking in size with great ascities. November 5, began to develop the picture of Icterus Gravis. Tyrosin and leucin present in the urine. Vomiting, diarrhoea; death in coma, November 15. Post mortem: Hob-nailed liver, very firm in texture, microscope showed lesions of a rapidly progressive cirrhosis with predominance of hypertrophic type, with at one period of the disease evidences of extensive fatty degeneration, necrosis and atrophy of parts of the liver. Remarks on nature and classification of cirrhosis of the liver.

(5) "The Treatment of Pneumonia," J. L. Tracy, M. D., Toledo. Discussion, Harmon B. Gibbon, Tiffin.

THURSDAY, MAY 12, 9 A. M.

Y. M. C. A.

(1) "Types of Status Lymphaticus Met With in Cleveland," Wm. T. Howard, M. D., Cleveland. Discussion.

(2) "Precordial Percussion Tenderness as a Guide to Estimation of the Size of the Heart, and Tension of the Arterial Wall, Endo-Arterial Blood Pressure and Hypertonus of the Arterial Wall," Charles F. Hoover, M. D., Cleveland. Discussion.

Abstract: By direct palpating percussion, the left border of the heart can be accurately determined in the early period of cardiac enlargement of cardio-vascular disease. The sphygmomanometer may be misleading unless controlled by palpation of the cephalic, brachial and femoral arteries. The distinction between vascular tension and endovascular blood pressure as recognized by palpation. The resistance of endovascular blood pressure and the resistance of hypertonic vascular walls to the pneumatic cuff.

(3) Special Address by Invitation—"Circulatory Changes in Exophthalmic Goitre. The Heart, Size of the Heart, Peripheral Dilatation of Vessels, Blood Pressure. Occurrence and Significance of Irregularities. Cause of the Circulatory Disturbances," Albion W. Hewlett, M. D., Professor of Internal Medicine, University of Michigan, Ann Arbor.

(4) Special Address by Invitation—"Laboratory Diagnosis in the Past Ten Years," Francis Carter Wood, M. D., Professor Clinical Pathology, Columbia University, New York.

Abstract: Introductory. Reason for limiting survey to ten years period. Changes in attitude toward laboratory methods. Tendency to return to purely clinical methods. Tendency to standardize and simplify the old laboratory methods. The important new laboratory methods for the diagnosis of tuberculosis and syphilis. Their technique, weaknesses and uses. Future lines of study. Conclusions.

(5) "The Protection of Child Life," Charles O. Probst, M. D., Columbus. Discussion, W. W. Brand, M. D., Toledo, and Herschel Fisher, M. D., Lebanon.

Abstract: It is not only the duty of the state, but it would be profitable for it to use every possible means to save child life. The enormous death-rate of children under one year (about 20 per cent of those born) can be greatly reduced by well tried measures. The state should enforce or compel municipalities to enforce such measures. Health interests may be best promoted by devoting a much larger share of time in schools and colleges to the study of hygiene and sanitation, and to physical education. This work should be in the hands of specially trained school physicians. We could well afford to devote half our time, if necessary, to study and exercises that would secure and maintain health.

FRIDAY, MAY 13, 9 A. M.

(1) "The Clinical Significance of Non-Diabetic Acidosis," L. A. Levison, M. D., Toledo.

Abstract: Popular conception of acidosis as being essentially diabetic. Distinction between diabetic and non-diabetic acidosis. Methods of determining acidosis, qualitatively and quantitatively. Acidosis as an aid to diagnosis. Clinical and pathological classification of types. The symptom-complex of acidosis. Prognosis. Treatment.

(2) "Polyuria and Thirst in Diabetes Mellitus," John P. Sawyer, M. D., Cleveland. Discussion, J. Henry Schroeder, M. D., Cincinnati, Frank Winders, M. D., Columbus, and J. J. R. McLeod, M. D., Cleveland.

Abstract: The paper presents the results of treating diabetics by gastric lavage, accomplishing the reduction of polyuria and thirst, diminishing the total solids excreted, checking loss of weight, and in some cases establishing decided gain in this respect. That this has been done in the face of continuing hyperglycemia is shown by determination of the sugar in the blood, showing its presence in large proportion after the thirst and polyuria had been overcome. The inference is drawn that polyuria and thirst as symptoms of diabetes mellitus are not dependent as usually taught, on the hyperglycemia alone, and that by treatment as described, the life of diabetics may be prolonged and the course of the disease made much more comfortable.

(3) "Three Years of Serum Therapy in Epidemic Cerebro-Spinal Meningitis," Wm. S. Chase, M. D., Akron. Discussion, Geo. F. Zininger, M. D., Canton.

Abstract: History of the serum treatment of the disease. Frequency of administration and dosage: results obtained. Absence of sequelae in patients thus treated.

(4) "The Exudative Erythemas and Their Visceral Manifestations," Mark A. Brown, M. D., Cincinnati. Discussion, E. W. Mitchell, M. D.

(5) "Syphilis of the Lungs, With Report of Cases and Skiagraphic Demonstrations," R. P. Daniells, M. D., and H. W. Dachtler, M. D., Toledo. Discussion, Sidney Lange, M. D., Cincinnati.

Abstract: Syphilis of the lung often diagnosed and treated for pulmonary tuberculosis. Out of 60 consecutive cases examined and studied with the X-ray, six were proven syphilis of the lung, uncomplicated by tuberculosis. Importance of differential diagnosis.

SURGICAL AND GYNECOLOGICAL SECTION.

Y. M. C. A.

WEDNESDAY, 1:30 P. M.

(1) "Haematuria," William E. Lower, M. D., Cleveland.

(2) "The Ego in Surgery," Harold Jacobs, M. D., Akron.

(3) "Fractures Complicating Dislocations of the Shoulder Joint," Joseph Ransohoff, M. D., Cincinnati.

(4) "Infantile Paralysis from the Standpoint of the Orthopaedist," Alex. M. Steinfield, M. D., Columbus.

(5) "The Treatment of Hip Disease in Relation to Its Pathologic Mechanics," Henry O. Feiss, M. D., Cleveland.

(6) "A New Operation for Basedow's Disease," J. H. Jacobson, M. D., Toledo.

(7) "The Factors of Safety in Operations for Goitre," Geo. W. Crile, M. D., Cleveland.

THURSDAY, 9 A. M.

(8) "A Consideration of Pneumonia With Abdominal Symptoms," H. J. Whitacre, M. D., Cincinnati.

(9) "The Natural History of Appendicitis," John C. Oliver, M. D., Cincinnati.

(10) "Etiology, Results and Treatment of Movable Kidney," R. E. Skeel, M. D., Cleveland.

(11) "Movable Kidney from a Medical Standpoint," M. J. Lichty, M. D., Cleveland.

(12) "The Movable Kidney from the Standpoint of the Genito-Urinary Surgeon," E. O. Smith, M. D., Cincinnati.

(13) "Penetrating Wounds of the Abdomen," Frank Fee, M. D., Cincinnati.

(14) "Ectopic Pregnancy with Report of Two Extreme Cases," Henry T. Sutton, M. D., Zanesville.

FRIDAY, 9 A. M.

(15) "Femoral Hernia," Geo. Goodhue, M. D., Dayton.

(16) "A New Method of Treating a Uretero-Cervical Fistula—Report of a Case," Earl Gilliam, M. D., Columbus.

(17) "An Ideal Surgical Treatment of Uterine Prolapsus," H. H. Hatcher, M. D., Dayton.

(18) "Prostatectomy," W. D. Hamilton, M. D., Columbus.

(19) "Further Consideration of Pancreatitis," C. N. Smith, M. D., Toledo.

(20) "The Cancer Problem as It Affects Women Especially," E. J. March, M. D., Canton.

EYE, EAR, NOSE AND THROAT SECTION.

Y. M. C. A.

WEDNESDAY, MAY 11, 2 P. M.

Eye.

(1) "Resume of My Experience in India," Chairman D. W. Greene, M. D., Dayton. (Stereopticon views illustrating life in India.)

(2) "The Instruments Used and Some Points

of Technique of the Major Smith Cataract Operation," D. T. Vail, M. D., Cincinnati.

Abstract: A detailed description of each instrument Smith used in his operation; arguments Smith presents to prove the advantages of each of these instruments over any other pattern in common use; exhibition of a complete set of instruments, original and not original, which Smith uses in doing his operation; arguments to prove that these simple instruments meet all the demands which arise in every operation for cataract, whether in the capsule or out of the capsule; a few valuable points on technic, showing the utility of these instruments and their singular adaptability to any and every emergency that may arise in the operation; reference to the dangers that an operator invites who attempts to extract cataracts in their capsules by the employment of the ordinary set of instruments; a note of warning to those who would exercise the courage to undertake "Smith operation" so-called, as a routine practice without a thorough knowledge and appreciation of the principles which underly successful extraction in the capsule.

(3) "A Comparison of the Old Cataract Operation with the New," C. F. Clark, M. D., Columbus.

Abstract: A comparison of two procedures and a preliminary study of how we should select the cases best adapted to each method.

(4) Additional record of experiences with the Major Henry Smith Intra-capsule extraction of cataract, Robert Sattler, M. D., Cincinnati.

Abstract: The joint removal of capsule and lens, the *sine qua non*, of extraction. Its most practical and successful realization after the method of Major Henry Smith. Evolution of method and technique since 1906. Reasons why time limit will be a long one before its more general adoption as a safe and eminently preferable modification is acknowledged. Advantages and shortcomings of method disclosed through personal experience.

Discussion opened by Louis Stricker, M. D., Cincinnati; A. R. Baker, M. D., Cleveland.

(5) "The Etiology and Pathology of Chr. Simple Glaucoma," E. H. Porter, M. D., Tiffin.

(6) "Some Observations on Car Nausea," Wylie Ayers, M. D., Cincinnati.

Abstract: The majority of all cases have some form of astigmatism which when corrected relieves the symptoms. Astigmatism contrary to rule is found in practically all of the typical cases. Some people having this condition do not experience nausea on cars, but always on elevators, and some after wearing correction for a while can dispense with lenses.

Discussion opened by Wm. B. Van Note, M. D., Lima.

(7) "The Fergus Advancement Operation for Ptosis," Edward Lauder, M. D., Cleveland.

Abstract: A brief classification of the various operations for ptosis—cicatrical contraction from sutures, operation by ligature, plastic operation,

advancement. Description of method of performing operation. Report of cases with photographs.

Discussion opened by C. L. Minor, M. D., Springfield.

(8) "Choroidal Atrophy in Myopia." (Original water colors, lantern slides), William S. Keller, M. D., Cincinnati.

Abstract: Process begins in the lamina vitrea; is not due to inflammation; defects in tissue where there is not vessel atrophy; due to mechanical causes. Pathogenesis; increase in size of posterior pole; formation of crescent; bent optic nerve canal; distraction crescent formed; foramen opticum lamina vitreal shifts; theories as to cause of post-staphylonia; proliferation in the sclera; effect of intraocular pressure on a congenitally weak sclera. Remedies: Stop near work; phakolyse.

Discussion opened by Charles C. Stuart, M. D., Cleveland.

(9) Bi lateral dermoid of the eye ball, with report of case," H. K. Stoll, M. D., Cincinnati.

Abstract: Extensive bilateral lipomatous dermoid affecting the palpebral and bulbar conjunctivae in both eyes and the cornea of the left eye. Interesting extra and intraocular complications. Operation completed by a novel manner of covering the conjunctival wound. Microscopic examination; theory of origin.

Discussion opened by A. L. Steinfeld, M. D., Toledo.

(10) "Some Facts Concerning Tests Used in Latent Muscular Deviations; Suggestions of New Nomenclature," J. E. Cogan, M. D., Cleveland.

Abstract: In the present nomenclature now in use for recording latent muscular deviations, the inference implied and taught is that the eye deviates directly up or down, in or out only, while being tested. Such is not a fact. The eye deviates to its position of rest for that test, no matter in what direction the streak of Maddox rod or other tests may be placed. Say M. R. is placed before O. D. streak vertical and it goes in 3 D. (3 D. exophoria); rotate streaks to horizontal and it goes up to 3 D. (3 D. right hypophoria). The point of light never went directly out 3 D. or up 3 D., but went the hypotheruse of the triangle $4\frac{1}{4}$ up and in, axis 45 degrees. This is the direction and measurement of the latent deviation. A chart will be shown demonstrating this fact.

Discussion opened by Wm. E. Bruner, M. D., Cleveland.

S. P. M., MAY 11th.

Y. M. C. A.

Address by George L. de Schweinitz, M. D., Philadelphia, Pa., "Concerning Some Ocular Manifestations of Cardio-vascular and Renal Diseases." (Illustrated with stereopticon views.)

Abstract: The paper, after a brief reference to the literature of the subject and to certain anatomical considerations of the vascular supply of the eyeball, discusses: (a) The significance of subconjunctival hemorrhages and of subcutaneous ecchymoses of the lid, especially of the recurrent

and alternating types. (b) The eyeground lesions of persistent high arterial tension, when this is a symptom of arterio-sclerosis, describing them in relation to age, early indications, significance, diagnosis and prognosis. (c) The value of ophthalmoscopic examination as compared with other instrumental examinations in the diagnosis of arterio-sclerosis. (d) Retinal changes in the presence of lowered arterial tension (hypotension) and their significance. (f) Certain types of renal retinitis and their significance in relation to diagnosis and prognosis.

THURSDAY, MAY 12, 9 A. M.

Y. M. C. A.

Ear, Nose and Throat.

(1) "Pathological Conditions of the Nose, Throat and Ear, as an Etiologic Factor in Degeneracy," Royce D. Fry, M. D., Cleveland.

Abstract: Over five hundred examinations of defectives show a very large majority suffer from pathological conditions of these regions. The results of treatment are so eminently satisfactory that it demonstrates the state's opportunity to do for her wards. Reformatory work, its defects and excellencies.

Discussion opened by Francis W. Blake, M. D., Columbus.

(2) "Hyoscine as a Prevention to Cocaine Poisoning and as an Adjunct to Cocaine Anesthesia: Based on Eight Hundred Cases," Myron Metzenbaum, M. D., Cleveland.

Abstract: In eight hundred cases no symptoms of cocaine poisoning developed when 1-100 gr. by mouth or 1-200 gr. hypodermically of hyoscine hydro-bromid, or what is the same, scopolamin, was administered half hour before operating under 1-10 of 1 per cent cocaine local injection. Hyoscine quiets the patient, benumbs their sensibilities and lessens amount of cocaine necessary to produce anesthesia.

Discussion opened by Ray A. Rice, M. D., Columbus.

(3) "The Possible Abuse of the Eustachian Catheter," J. B. Alcorn, M. D., Columbus.

Abstract: The importance of a diagnosis, as there is danger of doing harm in those cases of internal ear diseases by local treatment. Danger of infection by indiscriminate use of the Eustachian catheter. Suggestions of better results by aseptic air and aseptic channel through which the air passes, for the inflation of the Eustachian tube. Report of some experiments.

Discussion opened by Wm. C. Davis, M. D., Columbus.

(4) Non-operative treatment of Otitis Media, Pur., W. L. Carroll, M. D., Youngstown.

Abstract: Important to remove primary cause. Might be in nose or naso-pharynx. Recommends 1-2000 bichloride solution three times a day as wash and injection; into middle ear 1-5000 bichloride solution. No claim to cure all cases but many have been cured after having tried other treatment.

Discussion opened by Mark D. Stevenson, M. D., Akron.

(5) "Intra-tracheal Injections," (demonstrations), Thomas Hubbard, M. D., Toledo.

Abstract: The title has the sound of a rather formidable therapeutic procedure and in a measure this accounts for the tardy acceptance by the profession in general. The writer considers intratracheal medication by means of a special syringe, a very important and useful method of treatment, and presents the subject because it does not seem to have the popularity it deserves. Brief historical notes and reference to special writings on the subject. Demonstration of technique as simplified by the author.

Discussion opened by John M. Ingersoll, M. D., Cleveland.

(6) "Nystagmus as Related to Diseases of the Inner Ear and Cerebellum," Wm. B. Chamberlain, M. D., Cleveland.

Abstract: Ear Nystagmus possesses certain definite characteristics. The vestibule apparatus may be stimulated by turning, by injections of hot or cold water and by the galvanic current. These reactions are of great value in the differential diagnosis of circumscribed inflammations of the labyrinth, tumors of the acoustic nerve and in tumor or abscess of the cerebellum.

Discussion opened by Samuel Allen, Cincinnati.

(7) "Mastoid Operative Methods and Prognosis as Influenced by Labyrinthine Disease," J. E. Brown, M. D., Columbus.

Abstract: The analysis of function of the labyrinth, especially its relation to nystagmus, opened up a new field in otologic study. Its practical importance comes from the fact that we can now recognize the symptoms when we have involvement of the labyrinth in middle ear and mastoid infection. This involvement, if present, must now influence our choice of operative procedure, as enough work has now been done in analysis of these cases to lay down rules upon these points. What these procedures are, and the effect of labyrinthine involvement upon the prognosis. Report of a case of radical operation followed by diffuse infections, labyrinthitis and death.

Discussion opened by C. R. Holmes, M. D., Cincinnati.

(8) "Cerebellar Abscess," (with case report), William Mithoefer, M. D., Cincinnati.

Abstract: Various ways cerebellum may be reached by suppurative process. Reasons a diagnosis is different in early stage. Insidious onset. Headache earliest and most constant symptom. Location of headache no clue to location of abscess. Post-operative treatment important factor. Difficulties encountered in after treatment.

Discussion opened by J. W. Murphy, M. D., Cincinnati.

CASE REPORTS, EXHIBITS, ETC.

(a) Laryngo-tracheostomy for laryngo-tracheal stenosis; presentation of case, Louis F. Smead, M. D., Cleveland.

(b) Demonstration of radiograms of the mastoid, Samuel Iglauer, M. D., Cincinnati.

(c) Report of two cases naso-pharyngeal

fibromata, Wm. B. Chamberlain, M. D., Cleveland.

(d) A clinical adenoid demonstration of Dr. Hays' pharyngoscope, G. L. King, M. D., Alliance.

CLINIC 2:30 P. M., MAY 12th.

Laryngectomy (if possible). Lecture and demonstration of Jackson tubes, Chevalier Jackson, M. D., Pittsburg.

Smith cataract operations, by Drs. Greene, Vail, Clark and Sattler.

The above program should prove interesting to every eye, ear, nose and throat specialist in the state, and we are expecting a record-breaking meeting.

The latest developments in the surgical treatment of cataract and the latest in labyrinthine surgery will be fully considered by numerous papers devoted to these two subjects, and the other papers will be presented by men who are particularly interested in their respective subjects.

Dr. de Schweinitz, one of the guests, will deliver the evening address, and Dr. Chevalier Jackson will give a lecture, demonstrating his tubes and do a major laryngeal operation at the clinic on the afternoon of May 12.

Owing to the length of program and the limited time, Dr. Greene will begin his interesting talk about the things he saw in India (stereopticon views) promptly at 2 p. m.

You are requested to come in time to register and be in your seat in time to hear all of Dr. Greene's talk.

The papers are limited to fifteen minutes and the discussants to five minutes and all case reports, specimens, etc., to five.

A fee of \$1 is charged to help defray the expense of the section and should be paid when registering at the door.

OBSTETRICS AND PEDIATRICS.

WEDNESDAY 1:30 P. M.

Y. M. C. A.

"Infant Mortality: Its Principal Cause; Prophylaxis," A. F. Furrer, M. D., Cleveland.

"Some Factors in the Causation of Infant Mortality; Need of Their Elimination. How Done?" J. Morton Howell, M. D., Dayton.

"What Shall We do With the Baby in a Tuberculous Home?" Richard A. Bolt, M. D., Cleveland.

"Medical School Inspection," J. H. McHenry, M. D., Cleveland.

"The Nutrition of Twins and Triplets," R. L. Jett, M. D., Cleveland.

"Congenital Syphilis in Pediatric Practice," Fred Beekel, M. D., Cleveland.

"Syphilis in Pregnancy," Wm. D. Porter, M. D., Cincinnati.

THURSDAY 9 A. M.

Y. M. C. A.

"Pyelonephritis, a Complication of Pregnancy," Harry R. Brown, M. D., Chillicothe.

"Albuminuria in Pregnancy," George P. Dale, M. D., Dayton.

"Appendicitis During Pregnancy and Labor," A. H. Bill, M. D., Cleveland.

"Etiology; Diagnosis; Treatment of Scarlet Fever; Report of Cases," F. P. Anzinger, M. D., Springfield.

"A Consideration of the Pneumonias of Children," George Chapman, M. D., Toledo.

"Obstetrics as It is Practiced," Mark Millikin, M. D., Hamilton, Ohio.

"Intestinal Intoxication," J. J. Thomas, M. D., Cleveland.

"Carbohydrate Idiosyncrasy in Infants," Allan Ramsey, M. D., Cincinnati.

FRIDAY 9 A. M.

Y. M. C. A.

"Gonorrhea in Infancy," H. E. Smead, M. D., Toledo.

"Typhoid Fever in Infancy," Albert Bell, M. D., Cincinnati.

"Vaccine Treatment of Cervical Adenitis," Oscar Berghausen, M. D., Cincinnati.

"The Causes and Management of Prolonged First Stages of Labor," F. S. Clark, M. D., Cleveland.

"Acute Yellow Atrophy of the Liver in Children, with Report of a Case," John Phillips, M. D., Cleveland.

"Tetany in Children, with Report of a Case," D. S. Hanson, M. D., Cleveland.

"The Relation of the Teeth in Children to Certain Nervous Phenomena; A Preliminary Report," John D. O'Brien, M. D., Massillon.

SECTION ON DERMATOLOGY, PROCTOLOGY AND GENITO-URINARY SURGERY.

WEDNESDAY 1:30 P. M.

Y. M. C. A.

Genito-Urinary Surgery.

"Indications for Nephrectomy," E. O. Smith, M. D., Cincinnati.

Abstract: A general consideration of the symptoms that point to diseased or damaged kidney, such as pain, hematuria, pyuria, tumor, etc. Among the conditions on the part of the kidney that require its removal are hypernephroma, sarcoma, cystic, and poly-cystic degeneration, hydronephrosis, tuberculosis, calculi, pyonephrosis, and trauma. Differential diagnosis. Determination of the efficiency of the other kidney before operating.

Discussion by William E. Lower, M. D., Cleveland, T. M. Reade, M. D., Springfield, and S. J. Goodman, M. D., Columbus.

"Report of Cases of Arthritis of Gonorrheal Origin, and the Use of the Gonococcic Vaccine," Frank Oakley, M. D., Cleveland.

Abstract: A number of interesting cases will be reported in detail, and the technic of the use of the stock and autogenous vaccines will be gone into.

Discussion by J. W. Miller, M. D., Cincinnati, Clarence Ordway, M. D., Toledo, and Robert C. M. Lewis, M. D., Marion.

Annual Address.

"Sterility—The Causes and Operative Treatment in the Male," Francis R. Hagner, M. D., Washington, D. C.

Abstract: Causes of sterility, especially double gonorrheal epididymitis. A discussion of the operative treatment of this condition. Report of cases and results of operative treatment. Demonstration of the operative procedure on the testicle of the pig.

"Gonorrhea and Marriage," Starling S. Wilcox, M. D. Columbus.

"Intra-Vesical Operations—Phantom Demonstrations," Charles Melvin Harpster M. D., Toledo.

Abstract and Synopsis: The different operations will be discussed, and the different conditions of the bladder that can be reached by intra-vesical manipulation will be gone into. The limitations of the method will also be dwelt upon. The different cystoscopes will be exhibited and the Nitze operating cystoscopes will be demonstrated on the phantom; also the Bransford-Lewis universal operating cystoscopes. The different examining cystoscopes; the Luy separators; and the popular evacuators and stone crushers will also be shown.

Discussion by A. J. McCracken, M. D., Bellefontaine, and S. St. John Wright, M. D., Akron.

PROCTOLOGY AND DERMATOLOGY.

THURSDAY 9 A. M.

Y. M. C. A.

The address of the Section Chairman, "The Development of Modern Proctology," by Wells Teachnor, M. D., Columbus.

Abstract: The subject of proctology has exercised the genius of medical men from time immemorial. The indifference of the general practitioner and the radical measures offered by the general surgeon has made its practice a lucrative field for the quack and irregular practitioner.

Since the advent of local anesthesia much of this work has been reclaimed for the profession. It is now recognized as a legitimate field for the profession.

It is the recognition of the demand from the public for more conservative methods.

The practice of modern proctology means, no detention in hospital or loss of time from pleas-

ure or business pursuits, and the least suffering possible, consistent with the future comfort of the patient.

"The Radical Treatment of Internal Hemorrhoids Without Anesthesia and Without Pain," James A. Duncan, M. D., Toledo.

"The Extensive Syphilitic Ulceration of Tertiary Nature," A. Ravogli, M. D. Cincinnati.

Abstract: Ulcerative process is the result of a necrobiotic decay of the infiltrating elements, caused by the presence of pathogenic microorganisms. In the tardy syphilis often extensive ulcerations are found, which are due to a gummatous infiltration in the corium. It is a late localization of the treponema, which usually attacks parts exposed to irritation or to maceration from urine, from fecal matters, or from pathological secretions. The severity and the extension of the ulceration are due to the running down of the system, from poor nourishment, debility, which makes the skin thin and liable to be affected by the latent treponema.

Discussions by Robert S. Walker, M. D., Toledo, and H. B. Anderson, M. D., Newark.

Annual Address.

"Diagnosis of Skin Diseases" (Stereopticon), Grover W. Wende, M. D., Buffalo, N. Y.

Synopsis: Some of the different rare skin diseases will be demonstrated with the stereopticon. The commoner skin diseases will also be shown and dwelt upon at some length.

Annual Address.

"Some Symptoms Which Should Lead to the Early Diagnosis of Cancer of the Rectum." L. J. Hirschman, M. D., Detroit.

Abstract: It is well known to every surgeon that early extirpation of a cancerous growth offers the best hope of permanent cure. If patients suffering from symptoms referable to the rectum were subjected to a proctoscopic examination as a routine measure, pre-cancerous conditions would be diagnosed early enough to allow of successful operative interference.

From the histories of the author's cases he has selected the symptoms which were common to all of the cases at the commencement of the disease. Various gastric disturbances and constipation are common precursors of rectal cancer. Importance of proctoscopic examination in all cases presenting these symptoms emphasized. Brief histories of author's cases with reference to early symptoms.

"The Causes and Prevention of Premature Baldness," M. L. Heidingsfeld, M. D., Cincinnati.

Abstract: General classification of baldness and brief consideration of the various factors and influences of its production. Thallium acetate, X-ray, radium, and infections as causative agents. Eczema seborrhoicum and its causative effect. General observations regarding race, habit, and custom. Critical review of the literature. Consideration of the frequent and common causes of alopecia prematura. Cardinal symptoms. Prophylactic measures. A more

symptomatic, rational, simplified, and effective method of treatment.

Discussion by E. D. Tucker, M. D., Toledo, and Charles J. Shepard, M. D., Columbus.

"Radiotherapy in Dermatology, With Stereopticon Demonstration of Cases," Walter Irwin Le Fevre, M. D., Cleveland.

Abstract: The evolution of radiotherapy. Biological effect of the Roentgen ray. Indications of its use. Therapeutic results obtained.

Discussion by William O. Roop, M. D., Dayton, and A. W. Nelson, M. D., Cincinnati.

MENTAL AND NERVOUS DISEASES.

WEDNESDAY 1:30 P. M.

Y. M. C. A.

1. Chairman's Address, C. D. Mills, M. D., Marysville.
2. "Role of Functional Conditions in Psychiatry," J. C. George, M. D.
Discussion, W. C. Kendig, M. D., Cincinnati, A. B. Howard, M. D., Cleveland.
3. "Malingering and its Detection," E. E. Gaver, M. D., Columbus.
Discussion, C. F. Hoover, M. D., Cleveland, F. D. Ferneau, M. D., Toledo.
4. "Prognosis of Traumatic Neuroses," Louis Miller, Toledo.
Discussion, W. D. Deuschle, M. D., Columbus, H. S. Upson, M. D., Cleveland.
5. "Epilepsy," D. N. Kinsman, M. D., Columbus.
Discussion, W. H. Pritchard, M. D., Gallipolis, H. C. Rutter, M. D., Columbus.
6. "Treatment of Epilepsy with Calcium Lactate," M. L. Austin, M. D., Gallipolis.
Discussion, G. T. Harding, M. D., Columbus, C. S. McDougall, M. D., Athens.

THURSDAY 9 A. M.

1. "Subtemporal Decompression for Cerebellar Tumors—Its Dangers," H. H. Hoppe, M. D., Cincinnati.
Discussion, H. H. Drysdale, M. D., Cleveland, F. W. Langdon, M. D., Cincinnati.
2. "Dementia Praecox," Brooks F. Beebe, M. D., Cincinnati.
Discussion, W. B. Laffer, M. D., Cleveland, G. H. Williams, M. D., Columbus.
3. Paper, D. I. Wolfstein, M. D., Cincinnati.
Discussion, Philip Zenner, M. D., Cincinnati.
4. "Carelessness in the Examination of Patients for Admission to State Hospitals," H. H. Dorr, M. D., Athens.
Discussion, C. H. Clarke, M. D., Cleveland, R. C. Tarbell, M. D., Columbus.

WEDNESDAY 7:15 P. M.

Y. M. C. A.

Report of Committee for Prevention of Venereal Diseases.

ENTERTAINMENTS.

May 11 2:30 p. m.—Weather permitting, starting from Hotel Secor, the ladies will be taken to Bay View Park in automobiles; reception and tea, Toledo Yacht Club.

May 12, 2 p. m.—Weather permitting, starting from Hotel Secor, the ladies will be taken in automobiles up the scenic valley of the Maumee, stopping at the Country Club for tea.

Membership and guest badges, which are necessary for admission to the entertainments contemplated, will be issued on registration.

The Business Men's Club, on the sixteenth floor of the Nicholas building (Madison avenue and Huron street), extends the privileges of the club to all visiting members. Table d'hôte lunch is served from 11:30 to 1; dinner a la carte from 5:30 to 8. Billiard and pool tables, writing and lounging rooms are at the service of the visiting members. House cards for this club will be mailed every member of the Association.

Clinics at the local hospitals are being arranged for May 10 and May 14, to which all interested are invited.

STATE OFFICERS.

President—W. H. Snyder, M. D., Toledo.
Vice Presidents—H. R. Geyer, M. D., Zanesville; A. S. Rudy, M. D., Lima; C. A. Hough, M. D., Lebanon; T. M. Sabin, M. D., Warren.
Secretary—J. H. J. Upham, M. D., Columbus.
Treasurer—James A. Duncan, M. D., Toledo.

THE COUNCIL.

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Second District—Horace Bonner, M. D., Dayton.
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Fifth District—Clyde E. Ford, M. D., Secretary, Cleveland.
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Eighth District—C. S. McDougall, M. D., Athens.
Ninth District—John E. Sylvester, M. D., Wellston.
Tenth District—C. D. Mills, M. D., Marysville.

COMMITTEES.

Publication—Frank Winders, M. D., J. E. Brown, M. D., The Secretary.
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Member of National Legislative Council—B. R. McClellan, M. D.

SECTION OFFICERS.

Section on Medicine—Chairman, John Dudley Dunham, Columbus; Secretary, Willard J. Stone, Toledo.

Section on Surgery—Chairman, Robert Carothers, Cincinnati; Secretary, William A. Ewing, Dayton.

Section on Obstetrics and Pediatrics—Chairman, William Gillespie, Cincinnati; Secretary, Frank Lamb, Cincinnati.

Section on Eye, Ear, Nose and Throat—Chairman—D. W. Green, Dayton; Secretary, Wade Thrasher, Cincinnati.

Section on Dermatology, Genito-Urinary Surgery and Proctology—Chairman, Wells Teachnor, Columbus; Secretary, Charles Melvin Harpster, Toledo.

Section on Nervous and Mental Diseases—Chairman, Charles D. Mills, Marysville; Secretary, S. P. Fetter, Portsmouth.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.

ICTHYOL OF VALUE AS A SKIN VARNISH.

Kletz (Ther. Gazette, Feb., 1910, p. 85), in an article on skin varnishes commends ichthyol for this purpose. The specific action of the drug is well known, when used in erysipelas, a fact which may have led to its being overlooked as a varnish. Aside from its antiseptic value it makes an excellent varnish if applied in an aqueous sol. of 1 to 1, or 1 to 4. This when applied with a cotton swab or better with a camel's hair brush, will rapidly dry to a thin, elastic layer which does not contract like collodion and does not break over the joints. It excludes the air and other irritants without the use of any additional dressing. At ordinary temperatures the skin will be sufficiently dry after two minutes so that it is not sticky, but if needed an indifferent drying powder may be dusted on. Over moist surfaces it is well to apply absorbent cotton so as to favor scab formation. Upon raw surfaces ichthyol causes a temporary burning sensation, but of short duration. Ichthyol is easily removed by water, alone or with soap, and can be easily washed from the clothing.

Regarding the indications of its use Klotz is inclined to establish the rule that "the more intense the inflammation, the stronger the ichthyol should be applied." This causes the redness and swelling to disappear and quickly controls the itching and burning. As the symptoms subside weaker solutions are used. Ichthyol is an efficient and simple dressing in dermatitis venenata; is very valuable for burns of the first and second order; is excellent for frost-bite of a mild order; and for all those inflammatory conditions of the skin classified under the name of erythemata. In chronic eczema the results of ichthyol treatment are less brilliant than in acute conditions. It is, however, satisfactory if the chronic state be made acute by inunction with soap, applica-

tion of caustic potash, or the use of salicylic soap plaster. "The same treatment can be tried in psoriasis, lichen planus, and lichen simplex chronicus."

Ichthyol when combined with chrysarobin will prevent the dermatitis around the diseased focus and will not stain the clothes. Klotz says: "I use the customary sol. of chrysarobin in chloroform, then apply a 50 per cent sol. of ichthyol over this, and finally use a powder when necessary. Extensive areas of psoriasis are thus treated without the slightest disturbance. * * * By combining it with ichthyol I have been able to use chrysarobin, where otherwise it would be contraindicated, as on the scalp, owing to danger of conjunctivitis; or on the scrotum, perineum, and the region of the anus, the seat of the exceedingly obstinate eczema marginatum."

ERGOT'S PECULIAR ACTION ON ABNORMAL MUSCULAR FIBER.

Livingston (Med. Rec. Jan. 29, 1910, p. 182) after thirty-five years' use concludes that "in its therapeutic application ergot had not markedly affected the healthy contractile fiber, but that it did always affect markedly and often marvelously those areas of that class of tissue which were in an abnormal state, weak, relaxed, or stretched."

To this fact is due the apparent paradox that it may be used in certain instances to raise blood pressure while in other cases it lowers the pressure.

"If the cause of a too high blood pressure is an irritation to the heart, central or reflex, producing over vigorous pumping into the arteries, or is a great venous stasis against which the heart is vainly exerting, ergot, by relieving the congestion which has produced the irritation, or by contracting the over-dilated veins, will reduce the blood pressure. If the heart pump is weak

from a general exhaustion, the heart walls stretched and thin, or if there is so great a distention of the splanchnic veins that there is but little blood left to pass through the heart and arteries, as in syncope, collapse, so-called heart-failure, and shock from trauma, operation, or anesthesia, the lowered blood pressure will be raised if ergot is hypodermically administered, because this drug not only tends to normalize the weak and stretched heart fibers, but contracts the engorged abdominal veins and so restores to the arterial system the quantity of blood which it should have."

This equalizing of the circulation is a factor which makes ergot by hypodermic a valuable remedy in "heart-failure" and of great service even when used as a "last resort" in cases of angina pectoris in spite of the text-book statements that it is contraindicated.

"Ergot is, therefore, particularly indicated in cerebral or pulmonary congestion or hemorrhage, in hypertension from great venous stasis or from cardiac irritation due to congestion; in low blood-pressure conditions, such as syncope, collapse and shock; in angina pectoris; and, least, although generally considered first, in uterine inertia."

TWO SIMPLE RULES FOR USE IN THE METRIC SYSTEM BY THOSE ACCUSTOMED TO THE DOSAGE ACCORDING TO THE APOTHECARIES' WEIGHTS AND MEASURES.

Woodbury (Ther. Gazette Feb. 1910, p. 90) says: "Remember only that: 60 Cc.=2 oz. The rule is: For two-ounce mixtures, prescribed in one drachm doses, prescribe as many grammes or Cc of the drug as are desired grains or minims to each drachm dose of the mixture." Thus for a 10-grain dose of iodid to the drachm (teaspoonful) dose we write:

℞ Pot. Iodid, 10.

Aqua q.s. ad. 60.

M. Sig. 4. (i.e. drachms one) in water after meals.

Or to prescribe 10 minims each of two drugs we write for example:

℞ Tinct. nucis vomicae, 10.

Tinct. digitalis, 10.

Tinct. Card. comp. q.s. ad. 60.

M. Sig. 4. in water as directed.

For two, four, six, and eight-ounce mixtures the quantities are multiplied by the corresponding numbers. The plan is very simple.

"To make 1:1000 solutions use as many milligrams of the drug as there are Cc. of solution

required." Remember one ounce=30 Cc. To make one ounce of a 1:1000 sol. use .030 of the drug to 30 Cc. of diluent: For eight ounces (240 Cc.) use .240 to 240 Cc. In like manner any desired amount is readily calculated.

PROPHYLAXIS IN MALARIA.

Craig (Arch. Int. Med. Apr. 1910 p. 346) draws the conclusion that early administration of quinine will prevent the formation of the gametes which are essential to the transmission of the infection to the mosquito. "A great deal of the malaria in every malarial locality is directly traceable to improperly treated patients. The practice of regarding infections as cured because active symptoms have disappeared is a most pernicious one, and one that is responsible for the transmission of a large proportion of malarial disease. Every malarial patient should be kept on quinine for at least a week or two after the disappearance of symptoms, and should take the drug, in 10-grain doses, once a week for two months after the acute attack."

REMOVAL OF SKIN FROM THE ABDOMEN DURING THE LAPAROTOMY, AS A SOURCE OF MATERIAL FOR GRAFTING.

Gregory (Colorado Med. Jan. 1910 p. 21) makes the following suggestion for which he claims no originality as he presumes the procedure is one that has been used by others though he has not happened to see any reference to it:

In a recent case "an extensive granulating surface of the face and scalp was covered with Thiersch grafts, cut from a redundant piece of abdominal skin, that was discarded during the course of an operation for ventral hernia, subsequently rescued and kept in normal salt solution until it could be used.

"A longitudinal strip of skin and superficial fascia, in length equal to the abdominal incision, and in width from one-half to one inch, depending upon the amount of subcutaneous fat, and the redundancy of the skin, might be removed from either edge of the wound and cause no interference with the abdominal union, nor of the convalescence or convenience of the donor."

WHEN TO OPERATE FOR PELVIC INFECTION

Brickner (Discussion in Med. Rec. Mar. 26, 1910, p. 550,) says: "So far as drainage from below was concerned, this subject had long ago been threshed out before the section, but it could

be summed up in a few words. In any acute infectious process of the tubes and ovaries, do not operate; when the connecting tissue of the pelvis was the seat of an abscess, pointing in the posterior fornix, open from below. In subacute or chronic pus tubes, it was safe to operate from above."

ESTIMATION OF HAEMOGLOBIN AND THE MAKING OF A BLOOD FILM—PROCEDURES WHICH EVERY PHYSICIAN CAN USE.

Cabot (Ver. Med. Monthly, Jan., 1910, p. 1.) in an article on recent advances in our knowledge concerning the blood, rightly calls attention to the neglect of two simple and inexpensive procedures which the average practitioner should but does not use.

"The little Talquist scale is inaccurate, a rough and ready affair, but it is accurate enough for practical purposes and is easy and simple. With it it does not take more than fifteen or twenty seconds to make a haemoglobin examination and it will give you all the information you can do anything with, with regard to the question of anaemia. You can make it as well the first time as the one-hundredth. If the haemoglobin is normal by Talquist, you do not need to go any further with regard to the question of anaemia; you do not need to count the red corpuscles. Now in the vast majority of cases, the haemoglobin is normal, therefore your researches need go no further in this direction. This point seems to me of great importance as I see so many cases diagnosed as anaemia because the patient is pale. Pallor and anaemia have very little to do with each other. Many folks are pale but not anaemic. Some are anaemic but not pale. The use of that little book will decide the question in a minute. I hope I may persuade you that every physician should own that little book and use it right along in his practice. In the vast majority of cases I make no further examination than that."

Should it be desirable to have a leucocyte count, as in deciding between a toxemia, in which leucocytosis is rare, and pus or inflammation, even though we do not care to do the microscopic work "there is one thing we should all know and that is how to make a proper blood film for such an examination. I never go anywhere without carrying a couple of pieces of glass in my pocket. Ordinary window glass will do but microscopic slides are more serviceable. The first thing to do is to thoroughly wash the tip of the ear and prick it. Never pierce the finger. The ear is the least

sensitive and the finger the most sensitive part of the body. A drop of blood is then placed near one end of a glass slide and the other slide is used as a spreader and the drop is simply carried along as if you were spreading butter. You cannot do this wrong if you were to try to. The glass slides are easy to carry and to clean and quite hard to break. They can be sent through the mail and the blood slides will keep indefinitely unless there are flies around. In such case, they should be covered securely. * * * The diseases in which the presence or absence of leucocytosis is of most value are those characterized by fever. In all fevers when the diagnosis is not clearly defined, a leucocyte count will help you. Leucocytosis is absent in typhoid fever, malaria, measles, and early tuberculosis. Epidemic meningitis is practically always accompanied by leucocytosis and tubercular meningitis may or may not have leucocytosis."

In the stained films the presence of eosinophiles will often indicate trichiniasis although eosinophilia may occur in other conditions, as bronchial asthma, and in certain skin diseases, but here confusion is not liable.

THE DIFFERENTIATION OF EXUDATES AND TRANSUDATES.

"There is one method of examining such fluids which is simple and rapid, requires no especial training, and is considered of sufficient accuracy for clinical purposes, namely the occurrence or absence of a precipitate when the fluid is treated with dilute acetic acid. This phenomenon, though not new, is not sufficiently well known among the profession at large and an article by Pieper in the Mùchener medizinische Wöchenschrift for January 4, 1910, upon the subject is thoroughly acceptable. The practical test may be carried out by either one of two methods. Moritz recommended adding one or two drops of a 5 per cent solution of acetic acid to two cubic centimeters of the fluid to be tested, whereas Rivalta allowed one or two drops of the puncture fluid to fall into a cylinder containing two drops of glacial acetic acid in one hundred cubic centimeters of water. By the first method an exudative fluid at once forms a more or less thick cloudiness or even a heavy white precipitate. By Rivalta's method, as the drop sinks it is followed by a streak in the fluid closely resembling a wisp of cigarette smoke. If the fluid being examined is a transudate these phenomena do not occur, or at most there is formed but a slight pearly opalescence. The test tubes should be observed in front of a black background. The author has

examined 130 specimens from various sources and finds that the Moritz test is absolutely reliable in fluids from all serous cavities; where in a few cases of definite ascitic transudates the reaction was positive, the autopsy later demonstrated the existence of secondary infections. Rivalta's method has the advantage that but one or two drops of the suspected fluid is required. It is, however, though equally accurate in all other forms of effusion, somewhat indefinite when applied to cerebrospinal fluid. A thorough understanding of the two methods and their intelligent use may well be of value to the clinician in determining the often puzzling question of the differentiation of exudates and transudates."—Editorial, *Med. Rec.*, Mar. 12, 1910, p. 454.

OIL TO PREVENT INTRAPERITONEAL ADHESIONS.

Wilkie (*Surg. Gynec. & Obs.*, Feb., 1910, p. 126) basing his judgment upon his own, and the experiments of others, concludes that one is justified in using sterile vaseline oil in the peritoneal cavity in the following conditions: (1) In operations for the relief of old-standing adhesions; (2) in operations for localized or diffuse peritonitis, when handling of the viscera is unavoidable; (3) in operations for generalized peritonitis to favor subsequent drainage and intestinal peristalsis.

CONGENITAL ABSENCE OF ONE KIDNEY

Anders (Boston *Med. & Surg.*, Mar., 1910, p. 361, reported,) finds from records of 92,690 post-mortems, that one kidney was absent in every 1817 autopsies. In horseshoe kidney two ureters were common; in true congenital single kidney one ureter was the rule. He could not recall a single such instance though in a small percentage there are two ureters.

Shoemaker (in discussion) gave the following methods for determining whether the other kidney is present:

"To cut down upon it through the back of the abdomen. The peritoneum is opened and the other kidney felt for. This is a certain method as to presence of the other organ, but does not prove its function, and it adds to the risk of infection. A second method is catheterization of the ureters, referred to by Dr. Anders. This is not completely satisfactory because the introduction of a catheter into the ureter often inhibits partially the secretion of the corresponding kidney and causes error in diagnosis. A third method is that of so-called segregation, or forming two shallow urine pools in the bladder by an instru-

ment which raises the bladder wall between the ureter openings. It is inexact when local changes make the tissues more rigid on one side than on the other. Another method, which is very practical and will nearly always succeed, is to inject into the muscular tissue of the buttocks a carmine solution or give methylene blue by the mouth and then watch with the cystoscope as blue jets of urine spurt through the different ureters."

CALOMEL OF VALUE IN ASTHMA.

"Living in a small fishing town (Brixham, Eng.), where asthma is rather prevalent, Cecil B. F. Tivy writes of the curative effects of calomel in asthma. His patients have been mostly women, and of varying ages, and the attacks present the usual features in varying degrees of severity.

"He prescribes a powder of calomel, $\frac{1}{2}$ to 2 grn., according to the habit of the patient, accompanied, of course, by some of the usual antispasmodic remedies, and his experience is that relief is rapidly obtained, even before purgation takes place.

"Other cathartic drugs do not seem to have the same effect or certainly not so rapidly, and the ease with which the powder or tablet is taken is an important factor.—*British Med. Jour.*, Sept. 25, 1909." *Via. Merek's Arch.*

SYPHILIS AND PARESIS

"Now that it is practically admitted that the Wassermann reaction is, when positive, an incontestable evidence of active syphilis somewhere in the system, and that it has been found by recent observers to be practically constant in paresis and in a large proportion of cases of tabes, the old notion that these disorders are parasymphilitic, or not syphilitic at all in many cases, will apparently have to be given up. The fact that many writers, and, indeed, most text-book authors on insanity, have pointed out diagnostic symptoms of alleged value in distinguishing syphilitic insanity resembling paresis from paresis is of interest as showing a considerable waste of labor on their part. Undoubtedly a desire to avoid recognition of the specific etiology of paresis accounts for much of this. As the case stands at present, it appears that most, if not all, the objections to the syphilitic nature of paresis will have to go by the board, and this disease will have to be classed as a tertiary or quartan manifestation of syphilis."—Editorial *J. A. M. M.*, Mar. 26, 1910.

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKee, Collaborator.

Following is the program of the Cincinnati Academy of Medicine for April:

April 4—"Section on Specialties." Case report, "Leprosy," M. L. Heidingsfeld. Abstract: Report of a well-defined case of leprosy, with special reference to etiology. Nature of case not understood for fifteen years. Lantern slides showing chief clinical features and pathological specimens showing bacilli of leprosy.

Paper—"Finger Enucleation of the Tonsil," (Fifty lantern slides), Wm. Mithoefer. Abstract: The enucleation of tonsils necessary for good results in all cases. Anatomy and macroscopic pathology of tonsils. Indications for removal. Technique of operation. After-care. Accidents and complications. Conclusions.

April 11—Surgical Section. Paper, "Acute Hemorrhagic Pancreatitis with Report of Cases," Jos. Ransohoff. Abstract: Rarity of this disease. Difficulties of diagnosis. Unsatisfactory prognosis. Time and method of operating. Discussion, W. D. Haines, H. H. Hines.

April 18—Medical Section. Paper, "Blood Findings in Lymphatic Leukemia," Henry L. Woodward. Abstract: Numerical findings in white and red cells. Regeneration vs. degeneration. Report of case and demonstration of findings. Discussion, Clifford Sater, A. E. Osmond.

Paper, "Indications for and Usefulness of Some Diagnostic Methods for Diseases of the Digestive System," J. Henry Schroeder. Abstract: Need and practicability of application. Adaptability in general practice. Simpler methods of testing function of stomach. Interpretation. Determining position of stomach, in relationship to disease. Examining internal digestion. Testing for blood in-digestive tract; its importance. Discussion, H. W. Bettmann, F. L. Rattermann.

April 25—Address, "Some of the Former Medical Giants of France," (Thirty lantern illustrations), Francis Dowling.

SECOND DISTRICT

R. H. GRUBE, M. D., Collaborator.

Montgomery County Medical Society met April 1. The program was as follows: George B. Evans, "Surgery of the Specific Diseases of the Rectum"; J. A. Hodkins, "Puerperal Sepsis."

April 15 the Montgomery County Medical Society held a meeting with the following program:

J. B. Stewart, "Orthodontia and Its Relation to General Medicine."

A meeting of the Clark County Medical Society was held in the Commercial club rooms March 28. Postgraduate course; "Operations on Gall-Bladder and Ducts," H. T. Miller.

A meeting of the Clark County Medical Society was held April 4. Postgraduate course; "Diagnosis of Tuberculosis," I. E. Seward.

FOURTH DISTRICT

TODD DUNCAN, M. D., Collaborator.

A meeting of the Allen County Medical Society was held March 1. C. D. Gamble of Spencerville read a paper on "Anesthetics," taking up chloroform, ether, nitrous oxide and ethyl chloride. The paper brought out a lively discussion, in which the special anesthetist received a large share of attention. Some were of the opinion that the anesthetist should be a specialist; others thought that any careful physician, with such training as the present day medical college gives, could administer an anesthetic with the same degree of safety as the so-called specialist.

One speaker pointed out that since the latter day surgeon advocates the cause of the specialist and even goes so far as to say the anesthetist has the most dangerous part of the operation, he ought to be more considerate in post operative proceedings and not take all the fee while allowing his most valued helper to bear the responsibility.

At a meeting held in March, Wm. Roush read a paper on "Peritonitis." The essayist, while not presuming to give an exhaustive presentation of his subject, yet brought out the essential features of the etiology, diagnosis and treatment in such a way as to lead to a good discussion.

The matter of a medical library for reference purposes, having been introduced some time ago, was up for discussion at this time. A committee was appointed to devise ways and means for its establishment and maintenance.

A meeting of the Pathological Section of the Academy of Medicine of Toledo was held on April 8; program as follows: "Cystic Degeneration of the Kidney," J. Todd Duncan; "The Biology of Pneumonia," (analytical), J. L. Tracy. Discussion was opened by L. A. Levison.

A meeting of the Medical Section of the academy was held on April 15. "The Treatment of Pleurisy With Effusion," W. A. Dickey; discus-

sion opened by B. Becker. "The Role of Calcium in Tuberculosis," John North; discussion opened by L. A. Levison and J. L. Tracy.

SEVENTH DISTRICT

S. O. BARKHURST, M. D., Collaborator.

A meeting of the Jefferson County Medical Society was held April 12. After reading of minutes of last meeting by the secretary, reports of clinical cases were made by the society. A paper on "Etiology and Treatment of Threatened Abortion" by J. C. M. Floyd; discussion opened by W. E. Kerr.

The Columbiana County Medical Society met in East Liverpool April 12. The only essayist on the program who was able to be present was Harold A. Miller of the University of Pittsburg. His subject, "Puerperal Sepsis," was reviewed in an interesting manner.

NINTH DISTRICT

S. P. FETTER, M. D., Collaborator.

The Lawrence County Medical Society met in regular session March 24 and carried out the following program: "Early Diagnosis of Tuberculosis," Dan Gray; "What the County Society May Do to Prevent the Spread of Tuberculosis," T. H. Reamy; "Status of Tuberculosis in This City, County, and Treatment," E. E. Wells.

A very interesting meeting of the Pike County Medical Society was held Monday, April 4, at 1 p. m. Several interesting cases were presented, especially one of leukemia by Dr. Dixon. A paper was read by Dr. Caldwell on "Digitalis," which was thoroughly discussed by all the members present.

TENTH DISTRICT

FRED FLETCHER, M. D., Collaborator.

Regular meeting of the Columbus Academy of Medicine April 4. The program follows:

"The Importance of the Early Correction of Vision in Convergent Strabismus," by A. B. Nelles. Discussion: C. F. Clark, D. L. Moore and C. P. Linhart.

"The Diagnosis and Treatment of Pleural Effusions," by George M. Waters. Discussions: Drs. Lisle, Wolfe, Dunham, Warner, Winders, Shepard, McGavran and Baldwin.

J. F. Baldwin presented a fibroid tumor the size of a cocoanut recently removed at operation. The tumor was unusual in that it had a retro-

peritoneal position. The fact that it occupied the kidney region caused some difficulty in differentiating it from a renal tumor. Dr. Baldwin said that this was the first retro-peritoneal fibroid, distinct from the uterus, he had ever encountered.

C. M. Shepard presented the case of a young woman, twenty-three years of age, who from childhood had suffered from an extreme condition of genu-valgus. Her history is negative, except for "rheumatism" of the knees and legs which has persisted through life, and has caused her a great deal of suffering. She is undersized, but not underdeveloped. Her body is well formed, limbs well muscled, and but for the marked condition of bow-legs she would excite no special attention. Two sisters and two brothers, all of whom grew up together, are well developed and well formed. She is fifty-five and one-half inches in height and weighed on entrance to Grant Hospital, 125 pounds. She measured twenty-seven inches from the greater trochanter to the external malleolus, and thirteen inches from the internal deformity of the tibia to the internal malleolus. When she stood erect, with internal malleoli together, the distance between the inner surface of the knees was eleven inches. In this position it was very difficult for her to preserve her equilibrium, owing to the faulty muscular control due to the deformity. Her walk was materially changed from a stright-forward progress in erect carriage to a rolling gait with a decided waddle. Long continued standing or walking produced pain in the legs and feet to such an extent that she was accustomed, whenever possible, to sit while doing her work. Her last domestic service was in a family of five, and she was in the habit of doing the ironing sitting down. Tire in the feet and ankles was superinduced by several factors. The normal support of the feet and legs, from the ankles to the knees, was not directly transmitted to the body, so that in order to afford the necessary support to the body she was constantly required to make extra effort, both of muscles and tendons.

As the body weight increased with years this constant effort tended to increase the deformity at the knees. This in turn produced a secondary deformity at the ankles and feet, namely, a varus of the ankles, and a valgus of the feet.

Complicating this condition was the inner rotation of the tibia, so that there was in-toeing of forty degree from the normal position of the foot. The greatest point of curvature of the tibia was at the epiphyseal junction. Up to the age of fifteen or sixteen separation at this point is quite

usual. Constant pressure brought to bear at this point in any direction other than in a direct line with the shaft of the tibia, will in time produce a deformity consistent with the strength of the bones and the force brought to bear upon them. This case illustrates all these points, and it requires little attention to mechanical principles entering into them to enable one to follow the course of their development.

The femurs were almost unaffected, and the slight deformity existing could more easily be corrected at other points than by attacking them. However, the angle of deformity in both legs was so acute that the knee-caps had a history of being dislocated through the contraction of the quadriceps across the angle of deformity.

During the past two years her steady increase in weight, and the resulting increased bowing of the legs, has practically incapacitated her for self support, and she was therefore compelled to seek surgical aid. She had been advised to put her trust in braces, but declined the suggestion after consultation with her attending physician.

The age of the patient, the degree of deformity, and the several complications entering therein, precluded the use of braces, operation being the only possible course of procedure.

Four results were accomplished in this case:

- Correction of the curvature of the tibias.
- Correction of the rotation of the tibias.
- Correction of the in-toeing forty degrees.
- Correction of flat-feet.

These results were reached through multiple osteotomies, done at intervals. At the first seance both tibias were cut at the epiphysis, and corrected as much as possible. The feet were corrected to the position of club-foot, and the legs and feet fixed in plaster. In the course of five weeks the second osteotomies, four inches below the first, were made, and the curvature and rotation corrected. The plaster was reapplied.

Within two or three days following the operation the patient was allowed to be out of bed in a wheel chair. Had it been at all convenient, as in most cases, she could have spent a great portion of her convalescing time at home. She was encouraged to bear her weight on her limbs at an early date, and as soon as it was at all safe the casts were removed for the purpose of massage. Her recovery was uneventful, aside from a slight fall, which amounted to nothing in the final result.

In discussing this report J. F. Baldwin recalled a case of a young college student who unfortunately possessed bowlegs. He was quite sensitive about them, so much so that he spent much of his time when at home out on the farm, away

from friends and neighbors. He entered college, but hardly got settled before he imagined some one was making fun of his legs and he immediately packed up his belongings and went home. He then applied to the doctor for relief from this distressing condition. Osteotomies and corrections were made and in the course of time he went home a very happy mortal. While in the hospital he spent very many hours squinting down the straightened legs and trying to make himself believe that he was really gazing on straight legs instead of the offensive crooked ones he had possessed so long. The majority of people afflicted in this manner are of the opinion that nothing can be done for them, and so resign themselves to an unpleasant life, handicapped at every turn.

Meeting of Academy April 11. Program: "Practical Importance of the Determination of Blood Pressure; Demonstration of Technique," by Frank Winders. Discussions: Drs. Dunham, Upham, Kinsman, Deuschle and Clark.

"The Treatment of the Common Ano-Rectal Diseases by Ambulant Methods," by Wells Teachnor. Discussion: S. B. Taylor and E. A. Hamilton.

L. T. DeWald presented a case of conjunctivitis, the bacillus of Morax-Axenfeld being the offending organism. Dr. LeWald related the history of a recruit who had died from an acute dilatation of the stomach complicating measles. The stomach, together with the duodenum, which showed a remarkable dilatation, were presented. Discussion: Drs. Baldwin, Kinsman and Dunham.

D. N. Kinsman reported an unusual symptom-complex in two "brain" cases recently examined.

Meeting April 18. Program: "The Diagnosis and Treatment of Osteo-Myelitis—Presentation of Museum Specimens," by W. J. Means.

"The Value of the X-Ray in the Diagnosis of Bone Lesions—Demonstration of Plates," by Charles F. Bowen. Discussion: E. M. Gilliam, A. M. Steinfeld, C. M. Shepard and S. J. Goodman.

In presenting an X-ray picture of a fracture of the carpal scaphoid, L. L. Bigelow said that the photograph illustrated the pathology in many of the chronic cases of sprained wrist. Several years ago Dr. Codman of Boston, became interested in the subject and found on X-ray examination that a majority of the cases that were haunting the Out Patient Department of the Boston Hospital, complaining of an old sprain of the wrist, or a weak wrist subject to repeated sprains, were really suffering from the results of a fracture of one of the carpal bones—generally the scaphoid. Crepitus is usually absent in this form of fracture, and the differential diagnosis at the time of the accident between simple sprain and a

fracture of the carpal bones is, in most cases, impossible without the use of the X-ray. The treatment for the two conditions is practically the same, so that no harm is done by applying the therapeutic test. As a rule any patient who has not fully recovered from a sprained wrist in six weeks should have an X-ray examination made, and if the experience of Dr. Codman counts for anything, a fracture of the carpal bone, usually the scaphoid, will be found a surprisingly large number of times.

The patient whose X-ray I present is a railroad fireman. He first consulted me early in February with a sprain of the left wrist. By the middle of the month he had so far recovered that he insisted on returning to work as he had an opportunity to fire what he regarded as an easy run. On this trip he found it advisable for good reasons to jump from his engine while it was going at a rapid rate. He lit in the snow in a sitting posture and skidded along for several yards bringing up with his right hand outstretched against a post. In the excitement of his adventures he gave little thought to his wrist until the next day. There was nothing on physical examination of the right wrist that differed from the left wrist some two weeks previous. There was marked tenderness on the dorsum of the wrist not localized at any particular point; considerable impairment of the grip and some limitation of flexion and extension. At the end of four weeks all signs of trouble had disappeared and the patient was discharged. He did not go to work for another week. He then worked for nine days and found that after two hours his wrist began to get weak and then to pain him so that he was hardly able to finish a short run. He consulted me again and I sent him to Dr. Bowen, who confirmed my suspicions by finding a fracture of the scaphoid.

For this condition surgical treatment consists in the removal of the smaller of the two fragments through a posterior incision. If, however, the patient has a good grip, little or no limitation of motion, and complains only of weakness or pain on prolonged use, he had better be encouraged to bear the ills he has than fly to others he knows not of. I have seen the results of two cases of operative interference in chronic conditions of the carpal bones, and in each case the patient's last estate was worse than his first.

The Academy adopted a resolution indorsing United States Senate Bill No. 6049, which would establish a national Department of Public Health. patient's last estate was worse than his first.

NOTICE.

A reunion or gathering of the alumni of the Medical College of Ohio, Miami Medical and Cincinnati College of Medicine and Surgery, at an informal dinner on the evening of May 11, will be held at Toledo during the State Society meeting. The dinner will be one dollar per plate and all those who expect to attend should notify S. D. Foster, The Nicholas Bldg., Toledo, Ohio.

NEWS NOTES

The twelfth annual meeting of the American Proctologic Society promises to be a very successful one, judged from the program. This society meets in St. Louis this year just prior to the meeting of the American Medical Association. The program submitted by the secretary, Dr. Lewis H. Adler, is as follows:

Monday, June 6, 1910—Executive council meets at 11 a. m. First regular session at 2 p. m. Annual address of the president, "Undergraduate Proctology," Dwight H. Murray, Syracuse, N. Y.

PAPERS.

"A Review of Proctologic Literature for 1909," Samuel T. Earle, Baltimore, Md.

"Tuberculous Fistulae, and Fistulae in the Tuberculous," Charles S. Gilman, Boston, Mass.

"The Treatment of Rectal Fistula," J. Rawson Pennington, Chicago, Ill.

"Malformations of the Anus and Rectum; Report of Four Cases," Alois B. Graham, Indianapolis, Ind.

"The Use of Quinine and Urea Hydrochloride as a Local Anesthetic in Ano-rectal Surgery," Louis J. Hirschman, Detroit, Mich.

"A Description of a New Entero-colonic Irrigator, With the Indications for Its Employment," Samuel G. Gant, New York City, N. Y.

"Benign Growths, With Special Reference to Their Pathology and Treatment," James P. Tuttle, New York City, N. Y.

"The Atonic Rectum," William M. Beach, Pittsburg, Pa.

"Notes on a Case of Polypoid Fibrosis of the Rectum, with Exhibition of Pathological Specimens," James A. MacMillan, Detroit, Mich.

"Villous Tumor of the Rectum," T. Chittenden Hill, Boston, Mass.

"Significance of Rectal Hemorrhage," Louis J. Krouse, Cincinnati, Ohio.

"The Present Domain of Proctology Contrasted With the Conditions Existing Twenty-five Years Ago," Joseph M. Mathews, Louisville, Ky.

"Ano-rectal Affections of Infancy and Childhood," Alfred J. Zobel, San Francisco, Cal.

"The Tuberculin Reaction in Cases of Perirectal Infection," Collier F. Martin, Philadelphia, Pa.

(a) "Lane's Conception of Chronic Constipation and Its Management. (b) A Unique Case of Laceration of the Sphincter Ani," A. Bennett Cooke, Nashville, Tenn.

"A Resume of Cases of Carcinoma of the Rectum for the Past Fifteen Years," Samuel T. Earle, Baltimore, Md.

"Some Indications for Lavage, With Especial Reference to Adenomata and Cancer," George W. Combs, Indianapolis, Ind.

"Hemorrhoidal Clamp," Edw. A. Hamilton, Columbus, Ohio.

"Venereal Diseases of the Anus and Rectum," Thomas L. Hazzard, Pittsburg, Pa.

"Skin Manifestations of Amebiasis," John L. Jelks, Memphis, Tenn.

"Incontinence Following Rectal Operations," George B. Evans, Dayton, Ohio.

"Criticism and Controversy," Thos. Chas. Martin, Washington, D. C.

"Appendicostomy: A Consideration of the Preservation of the Blood Supply of the Appendix, in the Technic of the Operation," Frank C. Yeomans, New York City, N. Y.

"A Further Consideration of the Test Diet, Nitrogen and Sulphate Partitions, as an Aid to Diagnosis, in Intestinal Disturbances," Jerome M. Lynch, New York City, N. Y.

"Hemorrhoidal Operations," Leon Straus, St. Louis, Mo.

"Pain and Its Significance in Rectal Conditions," J. Coles Brick, Philadelphia, Pa.

"Reminiscences of Proctologic Interest," George J. Cook, Indianapolis, Ind.

"Some of the Complications Associated With Rectal Diseases," William L. Dickinson, Saginaw, Mich.

"A Brief Review of the American Proctologic

Society from Its Organization to Date," Lewis H. Adler, Jr., Philadelphia, Pa.

Charles W. Moots, of Toledo, announces that he limits his practice to surgery and gynecology.

MARRIAGES

W. A. Pauli to Miss Winifred Helen Weeks, of Toronto, Ont., March 29.

DEATHS

J. E. Tefft, Cincinnati Medical College, 1865, died at his home in Springfield, March 25, from apoplexy, aged seventy-three.

J. M. Blackford, Starling Medical College, 1865, died at his home in Martins Ferry, March 26, senile debility, aged seventy-two.

G. M. Bazemore, Nashville University, 1861, died at his home in Cleveland, March 24, from cardiac disease, aged seventy-six.

D. H. Reed (years of practice), died at his home in North Fairfield, March 26, from pneumonia, aged seventy-eight.

T. B. Cable, Miami Medical College, 1886, died at his home in Pemberton, March 20, from nephritis, aged fifty-three.

F. B. Entrikin, Ohio Medical College, 1894, died in Cincinnati, March 16, following an operation, aged thirty-eight.

O. S. Wood, Starling Medical College, 1891, of Haydenville, died March 14, from septicemia, aged forty-six.

J. H. Coombs, Cincinnati College of Medicine and Surgery, 1865, died at his home in Hicksville, March 13, aged seventy-seven.

H. R. Trollinger (years of practice), of Homeworth, died at his home March 8, from apoplexy, aged eighty-five.

G. L. Shipp, University of Baltimore, 1885, died at his home in Little Hocking, January 3, from cardiac disease, aged forty-seven.

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ORIGINAL ARTICLES

TRIVIALITIES AND PROGRESS.

J. F. BINNIE, M. D.,
Kansas City, Mo.

ANNUAL ADDRESS IN SURGERY.

[Read before the Ohio State Medical Association.]

From the earliest days, before even historians began recording events, the humble milkmaid knew that milk would quickly sour if her pans were not thoroughly cleansed and scalded; the housewife knew that her preserves were safe if after being thoroughly boiled they were kept free from air pollution; the plainsman knew that if his "jerked meat" was well dried his unsavoury provender was an assured asset.

Until the researches of Pasteur were published in France and applied to practical surgery by Lister in the old Royal Infirmary of Glasgow, surgeons were blind to the significance of the observation of the dairymaid, the housewife and the plainsman. Once these simple observations were properly understood and applied to surgery advance was immediate and enormous.

A consideration of some apparently self-evident principles, of some apparently trivial observations and investigations and of the benefits accruing from their recognition may be interesting and may encourage us to pay more attention to *principles* and to common sense in an age when we are liable to be swamped by the flood of the weird technical terms and weirder processes constantly flowing from the laboratories. Exact laboratory and experimental work is an absolute essential in our progress but the unfortunately too common, though unavoidable, divorce of the laboratory from the clinical study is liable to render the laboratory observer tyrannical or bigoted. This was forcibly impressed on me by a young graduate from a famous eastern university, who asked me, "Is there any one doing scientific surgery in this town?" On inquiry I found his mind impressed with the idea that the

only scientific surgery was that carried out on animals in the laboratory.

The earlier operations for the radical cure of herniae consisted in first reducing the rupture, second, exposing the ring and vivifying its edges, and third in uniting the edges of the ring by means of sutures. These operations were and deserved to be uniformly unsuccessful. Macewen, working in the same dingy old hospital which Lister had glorified, recognized that in inguinal hernia the "ring" was the result of an obliteration of the inguinal canal and he endeavored most successfully to re-establish the canal in its oblique course. This he accomplished by a simple mattress suture which brought the posterior surface of part of the fascia of the external oblique and part of Poupart's ligament into apposition with the anterior surface of the conjoint tendon. Macewen's idea was to restore the natural obliquity of the inguinal canal and in so doing he united the tissues—flat surface to flat surface instead of edge to edge. Practically all successful operations for inguinal hernia aim at the restoration of the canal and cure the rupture by intentionally or unintentionally securing apposition of surfaces instead of edges. As long as the attention of surgeons in the cure of hernia was directed towards the reconstruction of natural canals like the inguinal, their efforts were successful in such regions as the inguinal but when ventral or umbilical herniae were attacked—failure was the rule. Rutherford Morison endeavored to cure umbilical herniae by inverting the strong abdominal aponeurosis by means of sutures applied in the Lembert fashion and was successful according to the amount of surface apposition obtained. The Mayos were completely successful in curing umbilical hernia because, in the simplest manner possible, they obtained surface apposition. The whole principle of the closure of hernial openings is based on the fact that it is much easier to gum two sheets of paper together by their faces than by their edges. These principles are so absurdly simple and self-evident when they are stated, that their statement seems

almost an impertinence but we were all blind to them.

The greatest advances in our profession are almost always based on the simplest principles or ideas. When one finds oneself in the maze of modern bacteriologic terminology abounding in such precise, useful and mystifying terms as lysins, antilysins, autolysins, isolysins, heterolysins, receptors, complements, etc., etc., which clarify the doctrine of the production of immunity, when, I say, one finds oneself in such a maze it is difficult to realize that the marvelous development of bacteriology has been rendered possible by a ludicrously simple discovery. A great man made the discovery and this discovery gave him his reputation for greatness. If one mixes a small drop of liquid containing bacteria with a comparatively large quantity of warm sterile broth containing enough gelatine or its equivalent to permit of solidification at a very moderate temperature and if one pours this mixture onto a sterile plate, the bacteria are separated one from the other and kept separate as the gelatine solidifies. As the individual bacteria multiply they form colonies, each colony consisting of but one breed, and thus we have the pure culture. Koch's greatest contribution to science was this utterly simple discovery which every interested observer ought to have thought of—but did not. A good example of genius seeing the obvious. Barber's recent demonstration of the practical ease by which with simple apparatus it is possible with precision to draw individual bacteria into capillary tubes under guidance of the eye seems to me on a par with Koch's great discovery. Koch's discovery permitted us to obtain pure cultures of bacteria; Barber's discovery gives another means of doing the same thing but it also enables us to study the rate of growth of bacteria under varying conditions and what is more enables us to study the effects of inoculations of one, two, three or any definite number of bacteria.

A few years ago as a mere matter of study, some Germans investigated the pathology of ganglion, a lesion until then considered to be a hernia of the synovial sac of a joint or tendon. The immediate result of the investigation was the discovery that a ganglion is the result of a colloidal degeneration of connective tissue and that bursae seem to have a similar origin. The knowledge attained from the investigation seemed more interesting than useful—it's principal use apparently lay in the training afforded to the investigator.

Comparison of the histology of ganglia, bursae and joints show that these three structures are

very similar if not practically identical. Nelaton and others were struck by the fact that non-union of fractured bones was commonly due to the interposition of muscle, etc., between the fragments and hence in cases of bony ankylosis of the lower jaw when other methods of treatment failed, they excised the temporo-maxillary joint and filled the osseous defect with a flap of tissue obtained from the temporal muscle. This procedure was so successful that they applied the method to other ankylosed articulations.

J. B. Murphy, like many others, had read with interest the reports as to the origin of ganglia; he had also read of or seen the interposition of muscle in the treatment of ankylosis but unlike the many others who had studied at the same sources he put two and two together and united them with the spark of genius. If ganglia are the result of colloidal degeneration of connective tissue and this degeneration is due to trauma, why won't a similar degeneration take place in flaps of fibrous tissue if such flaps are made to envelope opposed sawn surfaces of bone.

Murphy, in a series of experiments, demonstrated the truth of his hypothesis and that the degeneration of the fibrous tissue flaps led to the regeneration or reformation of joints. The result of Murphy's brilliant work is the new chapter added to surgery, viz., arthroplasty. It is now possible in many cases to substitute a good functional joint for an immobile one and so add to the usefulness and what is almost, if not quite as important to the joy of living. Even knees in a state of bony ankylosis have been rendered mobile and useful by Murphy and by G. G. Davis.

These brilliant and beneficent advances have been based on the simple observation that soft tissues interposed between the fragments of a fractured bone prevent union and on investigations into the origin of such a simple and uninteresting little lesion as ganglion.

FIBROUS ANCHYLOSIS.

From disease or trauma the synovialis of a joint or tendon sheath may become inflamed (when trauma is the cause infection is usually absent). The sequence of events is somewhat as follows: (a) congestion, (b) exudation of plastic lymph and *restitutio ad integram* or organization of the lymph—the temporary adhesions becoming permanent, i. e., fibrous. All these events are curative. It is presupposed that nature has overcome any infection which may have been present. The classical method of treating fibrous ankylosis is by means of passive motion, an endeavor being made each day to increase the range of motion. This may be aided

by the induction of hyperemia as first suggested by Thomas of Liverpool, and later by Bier. Passive motion frequently or even usually gives good results, but there are many cases where the adhesions will not stretch sufficiently or will not give way to the method and the repeated slight traumata cause pain and disability without any compensatory value received. The effect on the lesion is analogous to that exerted on a long suffering family by the nagging tongue of a neurasthenic dyspeptic.

More vigorous treatment is now indicated, viz., the forcible breaking down of adhesions under an anesthetic. The natural result of such an operation is once more the production of the usual phenomena of inflammation and the classical treatment is rest. If we are treating a wound and desire primary union we place the raw surfaces of the wound together and keep them at rest until plastic lymph glues the surfaces together and is later replaced by fibrous tissue. This is exactly what is being done every day after fibrous adhesions are broken, the ruptured, i. e., the wounded, fibrous bands are put and kept in the best possible condition to unite again in the hope that when healing has taken place they will be more amenable to treatment by passive motion. Many, many people crippled by fibrous ankylosis, the result of trauma or of disease which has long ago disappeared, having gone the rounds of eminent and good surgeons suffering much and gaining nothing, at last fall into the hands of the bone setters, or their successors, the osteopaths, and are cured. The bone setters had absolutely no knowledge of anatomy, and had but one diagnosis, viz., "a bone out of place." This displaced bone they proceeded to "put back" by a series of vigorous, definite, purposeful, unhesitating movements in the direction which elicited most pain. Their attempt was to secure full or nearly full motion of the affected joint at one sitting. Usually during their manipulations the patient could hear and feel something crack or give way. Both operator and patient considered the crack of the rupturing adhesion to be the noise of a displaced bone or tendon snapping back in place. Having demonstrated that the joint could move the operator ordered cold applications, a moderate amount of rest and saw to it that the joint was *moved daily*, i. e., he prevented the reformation of the adhesions. In the past we have been so afraid of reactive inflammation that our after-treatment of the conditions under consideration was the best possible means of undoing every particle of good obtained from the operation performed. We ought to have known all this from our knowledge of the pathol-

ogy of the traumata of serous membranes—the truth was staring us in our faces—the good results obtained by the bone setters were damning us and indicating our faults, but we were blind to the obvious. Do all of us see even now? The bone setter treated recent sprains by rest and obtained results similar to those of regular practitioners. In a minority of cases the joint became and remained stiff and painful and he admitted that a "bone out of place" had been overlooked by him but being recognized could now be cured.

Mr. Wharton Hood, of London, did a great service to the profession by publishing, many years ago, an account of the methods and results of a famous old bone setter and demonstrating the truths and the fallacies inherent to them. Sprains are no longer treated by complete rest. Rest is the best means to promote stiffness after trauma. By means of adhesive strips (not too tightly applied) strain is taken off from the injured structures and the patient thus protected encouraged to use the affected joint with the result that the active movement of the parts encourages absorption of exudates, etc., encourages nutrition and discourages the formation of crippling adhesions and callosities.

VASCULAR SURGERY.

If for any reason the eye is kept open for a protracted period of time, even if it is protected from dust, etc., conjunctivitis will soon develop. If the experiment is carried out in the dry altitudes of Arizona the conjunctivitis will be more rapidly developed than it would be in the lower, moister regions of the sea coast. The cause is self-evident—the normal moistness of the conjunctiva is lost by evaporation.

In the physiologic laboratory a student spreads out the mesentery of the frog under the microscope in order to study the circulation of the blood. Very quickly the blood stream slows, the corpuscles congregate, the circulation stops and the whole experiment is over before the student has had time to observe much of the normal vascular flow. If, however, the exposed mesentery is kept moist by a continuous supply of warm salt solution, the circulation goes on almost indefinitely and the student can study it to his heart's content.

In the one case exposure to the air permits evaporation of the fluids from the delicate mesentery and the phenomena of inflammation promptly appear; in the other case evaporation is prevented or discounted and these phenomena are indefinitely postponed.

In practical surgery, if we pull a loop of intestine out of its normal habitat and expose it to

the air it quickly loses its normal lustre, becomes dry, later becomes covered with lymph and readily adheres to almost anything which touches it. It presents many of the phenomena of inflammation. These observations are so well known as to be almost banal and yet our surgical predecessors were blind to these facts, we ourselves are often blind to them and our successors will frequently neglect them they are so self evident—so prominent as to be ignored.

Who has not seen surgeons, and good surgeons, too, open the abdomen, expose the site of disease and *protect* the rest of the abdominal cavity with large pads of *dry* absorbent gauze? It would be difficult to use any material better adapted to dry the delicate peritoneum and thus produce in it many of the phenomena of inflammation. If the gauze has been wrung out of warm salt solution, or better still out of warm liquid vaseline, then it becomes a real protection not only against the influx of infection, but against evaporation.

In vascular surgery great forward strides have been made, notably by Carrel and by Crile. Arteries have been divided and then united by suture; segments of veins have been used to take the place of portions of arteries which have been destroyed, not to speak of the surgical gymnastics practiced in the transplantation of organs and limbs from one animal to another. Of course, these triumphs would be impossible without great technical skill and delicacy, but others possessing equal technical skill and delicacy have in the past attempted similar feats only to meet with failure in that blood clots formed inside the wounded vessels. Why have the Criles and the Carrels succeeded in arteriorrhaphy and why did their predecessors uniformly fail? The answer (always presupposing skill, delicacy and so forth) lies in the fact that the successful experimenters by means of salt solution or its equivalent and by means of vaseline prevented evaporation from and drying of the intima. The successful operators recognized the law that blood will coagulate on the intima of a vessel when that intima is inflamed and that any delicate serous or mucous membrane exposed to the air becomes dry by evaporation and so becomes inflamed. These men had the genius necessary to see and seize the obvious. The rest of us had looked at the blood circulating in the vessels of the frog's mesentery,, we had known that it was necessary to keep the mesentery moist otherwise the circulation would stop, but while these facts were before our eyes *we* were not seers—our eyes were so intent on hunting for difficulties and obscurities that we could not see the obvious and so we failed to progress. Genius has

been called "the infinite capacity for taking pains"; would it not be better to call it the capacity for seeing the obvious.

THE NITRITES AND THE INDICATIONS FOR THEIR USE.

W. J. CONKLIN, M. D.,
Dayton.

[Read before the Ohio State Medical Association.]

Although modern experimental methods have greatly advanced our knowledge of the cardiovascular drugs it is safe to affirm that many excellent practitioners are disappointed in the therapeutic results obtained.

This is especially true of the vaso-motor depressants of which the nitrites are the best exponent, and to which we will limit our discussion.

The physiological action of this group of drugs is pronounced and is displayed chiefly upon the blood vessels and blood. While they, in a measure, depress the vaso-motor centers their force is largely and directly expended upon the muscular walls of the smaller vessels, and by widening these blood paths literally bleed one into his own veins and cause a prompt and marked fall in blood pressure. This vascular relaxation, of which the flushed face is an evidence, extends to the entire peripheral circulatory system, but is especially marked in the splanchnic area, cerebral arterioles and in the coronary arteries.

The nitrites change the hemoglobin of the blood into methemoglobin and thus impair the oxygen-carrying power of the corpuscles. It is of interest to note that methemoglobinemia and other signs of nitrite poisoning have following the giving by mouth and rectum, or the injection into suppurating sinuses of large quantities of bismuth subnitrate for radiographic and therapeutic purposes. Boehme, Novak and Gatig have experimentally proven that this toxic effect is due to the absorption of nitrites liberated from the bismuth salt by certain intestinal bacteria. It has been suggested that in radiographic work bismuth hydroxid be substituted for the subnitrate, especially if there is evidence of intestinal putrefaction.

The effect of the nitrites on the heart is still a mooted question.

According to Reichart, amyl nitrite, in small doses and for a brief period stimulates the heart muscle, and in some more recent experiments on dogs, this conclusion has been confirmed by others. The trend of opinion, however, is op-

posed to this view, and, begging the question as to a primary stimulant effect, it cannot be too strongly emphasized that their dominant action is depressant.

Indirectly the nitrites may bring relief to a fagged heart by lessening peripheral obstruction and thus lightening its load, but if they have a true stimulant action it is of short duration, and the zone between stimulation and depression is so narrow as to suggest caution in their use in all forms of circulatory enfeeblement.

Crile and others have demonstrated that the heart failure of acute infections is really a vasomotor paralysis.

As a result of the paresis the arteries in the great splanchnic area are over-filled with blood, while the brain and heart are bloodless, it may be, to the point of threatening immediate dissolution. In these conditions the giving of a vasodilator drug adds to the paresis and intensifies the abnormal blood distribution. It may be safely said that with our present knowledge the nitrites have no place in the therapy of collapse in acute infections, in the shock of traumatisms or in the accidents of narcosis.

The marked attribute of the nitrites is their power to dilate the peripheral arterioles, allay arterial spasm and to bring about the prompt lowering of an abnormal blood tension.

A persistent high blood-pressure is indicative of a distinct pathological change in the cardio-vascular or renal systems, one or both, and its early recognition by the sphygmomanometer will sometimes fix a diagnosis otherwise unattainable until the kidneys, pass albumin, the heart dilates or a cerebral artery ruptures. The necessity for interference in many cases to prevent irreparable injury to heart and blood vessels goes without saying, and there are few who have not observed the magical yielding of ugly symptoms to the lowering of an excessive hypertension.

On the other hand, a high blood pressure may be a compensatory provision and a rapidly falling pressure may be of bad omen. In many cases the prime indication is not to knock down the hyperpysis but to rid the blood stream of the vasoconstricting toxins which are disturbing the circulatory equilibrium.

It is not good practice to resort to purely blood pressure reducing drugs before an effort is made to reach the end by regulating the daily living and eliminating the causative toxins. A good old fashioned round of calomel and soda will often do better work than nitroglycerin in reducing hypertonus. The diagnosis of interstitial nephritis, in which the blood pressure readings are notably high, is considered by many as sufficient

justification for the continuous drugging with nitroglycerin, a fallacy which cannot be too strongly condemned.

In truth, the contrast is often so marked between the feeling of comfort and vigor during the high-tension period of the disease and the distress incident to the low-tension period as to almost justify the saying of Broadbent, that it is not high-tension, but low-tension which is to be feared in chronic nephritis.

Every physician knows nephritics of long standing who are apparently in excellent health, but whose heart and kidneys carry unmistakable scars of disease. Some diseased kidneys only functionate well under pressure and to disturb the compensation is to usher in at once the end-symptoms of a nephritis.

Let it be conceded that the indication for vasodilation in chronic renal disease is not the mere presence of urinary findings, but the actual demonstration by the sphygmomanometer of a dangerous hypertonicity.

It is perhaps impossible to mark out a definite danger line in blood tension for this must vary with the general physical condition, the environment, the changes which have taken place in the cardio-vascular apparatus and especially in the walls of the smaller vessels, but a reading above 170 mm. hg., which does not yield to simple measures, is of grave suspicion. The reduction in tension which should be secured by drugs cannot be accurately expressed in mm., but under ordinary conditions, barring emergencies, it will rarely be judicious to lower the blood pressure more than from 15 to 25 mm. hg.

A study of chronic disease of the heart leads to similar conclusions.

It is well known that a certain amount of vascular contraction is necessary to maintain a good systemic circulation, and also that a considerable degree of intra-aortic pressure is equally necessary to a good coronary circulation upon which depends the integrity of the cardiac-musculature.

Tigerstedt and Johansson have shown that in many conditions of low arterial pressure the ventricle, despite the diminished resistance, in the aorta may be unable to completely empty itself, a phenomenon reasonably attributed to lessened contractile power the result of insufficient nutrition. In a recent paper H. C. Wood, Jr., strongly protests against the indiscriminate use of vasodilator remedies in chronic cardiac disease, and attributes the little harm which has come from this practice to the fact that as ordinarily used the drugs are practically without influence for weal or woe.

To have a true conception of the role of the

nitrites in high blood pressure one must keep in mind two of the prime causes of the condition:

1. Fibrosis or thickening of the vessel wall and narrowing of its lumen.

2. Vascular spasm brought about through the nervous centers or the presence of deleterious substances in the blood stream.

In simple arteriosclerosis the blood pressure is not greatly raised, unless as has been shown by Hirsch and Hasenfeld, there is involvement of the thoracic aorta or of the splanchnic vessels.

It occasionally comes within the observation of every practitioner that an old man with pipe-stem radials and tortuous temporals will give a normal sphygmomanometer reading.

That vascular spasm is a determining factor in producing super-blood pressure is shown by the clinical histories of such hypertensive diseases as angina pectoris, migraine and Raynaud's disease.

In the latter one may note not only pain, ischemia and loss of function, but transient aphasias and mono and hemiplegic attacks which are unquestionably due to spasm of the cerebral arteries.

Undoubtedly sclerosed vessels are abnormally susceptible to spasm and probably in direct proportion to the degeneration of their walls. The degree to which high arterial pressure can be lowered by the nitrites depends largely upon the amount of vascular spasm present. In most cases arterial spasm and fibrosis are associated. If the former is the dominant factor brilliant results may attend the giving of a nitrite, but in the presence of extensive structural changes its use can avail little.

Internal hemorrhages offer a comparatively new field for the exploitation of the nitrites.

No one would attempt to arrest bleeding of any kind by drugs if mechanical control were available. In certain hemorrhages like those of pulmonary or intestinal origin, drugs which simulate nature's method of lowering blood pressure even to syncope, and thus favoring coagulation, may be of service, if the condition of the heart does not contra-indicate their use. In truth, the vaso-dilators improve on nature's way to the extent that the blood is not lost to the body but only temporarily stored in the great splanchnic reservoir.

Dr. Cook points out that in operative procedures where control of the bleeding is difficult a lowering of the blood pressure by drugs may be of signal service and cites in proof a Gasserian operation on a man with sclerosed vessels and high arterial tension in which an alarming hemorrhage was uncontrollable by the ordinary means until the tension was reduced.

Notwithstanding that the pulmonary circulation does not seem to be affected by the nitrites to the same extent as the general circulation, they have been of late extensively used for the control of hemophysis.

Dr. Flick in a recent article says that whenever he detects an accentuated aortic second sound with a super-normal blood pressure in a tubercular patient he immediately administers nitroglycerine and minimizes the danger and frequency of hemorrhages.

It is common knowledge that uremic manifestations run closely parallel with the elevation of the blood pressure.

This is also true of all puerperal toxemias and gives an ominous significance to any increase of tension during pregnancy. There is a normal rise in blood pressure in the last months of pregnancy, which should quickly fall to normal after delivery, and the failure to do so is a very sure precursor of eclamptic seizures.

The nitrites have a marked sedative action on the motor side of the spinal cord which accounts, in part, for their efficiency in eclampsia, in tetanus and in the convulsions of strychnine poisoning.

The individual nitrites, including nitroglycerine and nitro erythrol which in the blood stream act precisely as nitrites, vary greatly in rapidity and power of action. For the accidents of angina pectoris, cardiac asthma, uremia and kindred conditions there is no drug which can replace amyl nitrite. Its marvelous swiftness in action, diffusibility and ease of administration fit it for an ideal emergency remedy. The effect of a single dose, unfortunately, only lasts from ten to twenty minutes.

Nitroglycerine, the most popular of the group, holds an intermediate place in promptness of action, but is less dependable than the sodium or erythrol salt.

The sphygmomanometer shows that the effect of a single dose of glonoin rarely lasts, under the most favorable conditions, more than an hour, and the folly of expecting permanent results from ter-diem dosing in chronic hypertension is apparent.

More enduring in effect than nitrite of amyl it should still be classed with emergency drugs.

Undoubtedly many of the accredited failure of nitroglycerin come from improper giving and from the use of preparations which are inert from chemical changes.

It should always be prescribed in freshly made solutions or in the official spiritus glycerylis.

Miller and Mathews found in experimenting on animals that some alcoholic solutions obtained

from reliable pharmacists were totally inert even when injected into a vein.

In tablet form it is notoriously unreliable. Brinz and others have repeatedly failed to find a trace of nitroglycerin in samples submitted to analysis.

Tolerance to nitroglycerin is easily established and the best results are obtained by giving it in gradually ascending doses, guided solely by the constitutional effects. This can be done with reasonable boldness. Lauder Brunton, who first used the nitrites for the relief of grave angina, records that he has never seen bad effects from an overdose of nitroglycerin or amyl nitrite other than a headache or transient faintness.

Recent reports of nitrite poisoning from the decomposition of bismuth subnitrate, already noted, may lead to a reversal of this judgment.

The popular tablet which combines several cardiac stimulants with glonoin is open to criticism for the reason that, at first, the nitrite effect overshadows that of the cardians which are slower in action, and when the latter become effective the arterial dilatation has passed and the pressor effect of the digitalis and strophanthus is unopposed.

When such a combination is needed, and it often is, each class of drug should be given separately, the heart tonic to be followed in from one to four hours (according to which one is used) by the vaso-dilator and thus the physiological action of each is secured at the proper time.

For routine use and when sustained effect is sought sodium nitrite and erythrol tetranitrate are, by odds, the best of the class.

The action of both is produced promptly, persists for about four hours and gradually passes as the drugs undergo oxidation. Dr. Cook, who has had a large experience, prefers the sodium salt. It is quite deliquescent and should always be dispensed in fresh solutions.

Erythrol tetranitrate, which was brought to the attention of the profession by Prof. Bradshaw in 1895, is preferred by most English physicians. While my limited use of it has been very satisfactory I am not sure that its superiority over the sodium nitrite is sufficient to compensate for its increased cost.

It is attended with little or no facial flushing or headache.

The dose is from one-half to one grain, and on account of its explosiveness, is marketed only in tablet form.

In acute febrile disturbances with high arterial tension there is no better remedy than a freshly made solution of ethyl nitrite, the sweet spirits of nitre of the fathers which for long has been relegated to the top shelves

Its diuretic and diaphoretic properties especially fit it for use in acute sthenic inflammations, and combined with aconite in selected cases there is little to be gained by a further search of the pharmacopeia. Vaguez maintains that the spirit of nitrous ether is more of a circulatory sedative than the other nitrites and better adapted for continuous use.

To conclude, there comes a time in the history of every cardio-vascular disease, whether due to myo-carditis, valvular lesion, arterio-sclerosis or nephritis, when the heart has seriously encroached on its reserve power and begins to stagger at its work.

Hypotension now replaces hyper blood tension. The time and indication for the vaso-dilator drugs have passed, and our trust must be pinned to the recognized heart stimulants of which digitalis is still king.

"The physician should have blazoned before him, 'If you can do no good, do no harm.' If this rule is adhered to, in ninety-nine cases out of one hundred the physician will give no alcohol. In the medical wards of the Pennsylvania Hospital I have found that in acute as well as chronic disease we can do without alcohol. It does harm rather than good. Alcohol masks the symptoms of disease so that we cannot know the patient's real condition.—J. H. Musser, M. D., Philadelphia, Pa., Ex-President American Medical Association.

"The conclusions of laboratory workers do not apply absolutely. Nevertheless, I am convinced that alcohol is prescribed much too freely in the treatment of the sick, especially in such conditions as mild typhoid fever, neurasthenia and early tuberculosis. My own use of it is very limited, and never as a routine measure. I order it in definite dosage and at definite periods when I deem it indicated, in the same manner in which I would order strychnine, opium, or other agents that may be useful or harmful, according to circumstances. In the majority of cases of typhoid fever—even in those in which 'tubbing' is employed—no alcohol is given from beginning to end. In the hospitals where I am on duty I have long been in the habit of directing the attention of the resident physicians to this avoidance of alcohol, and of asking them to compare the results with those attained under its free use. They admit that nothing seems to be lost—which is as much as I care to assert."—Dr. Solomon Solis Cohn Jefferson Medical College, Philadelphia, Penn.

PNEUMONIA WITH SEVERE ABDOMINAL
SYMPTOMS SIMULATING ACUTE DIS-
EASE OF THE REGION.

H. J. WHITACRE, B. S., M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

It has within the past few years fallen to my lot to see a number of acute abdominal cases with a view to operation where a complete physical examination and later developments have revealed a pneumonia. In all of these cases the abdominal symptoms have been primary. They have simulated acute appendicitis, cholecystitis or intestinal obstruction. These patients have been seriously sick when seen; have always been in the nature of emergency calls, and have presented very great embarrassment in the matter of diagnosis. The importance of a correct diagnosis in such cases is apparent and it seems to me that these cases are worthy of report, as a warning to others who may encounter this pitfall of surgery. This type of disease will be represented by the following report of cases.

CASE 1. A woman, 35 years of age, was sent to the hospital, a distance of about forty miles, as an emergency gall-bladder case. She gave a history of very sudden onset with pain, which was limited mainly to the right upper quadrant of the abdomen. Associated with the pain there was vomiting, and a failure of the bowels to move. The temperature was elevated from 101 to 102; pulse was very rapid, and patient felt greatly prostrated. Physical examination of the chest is negative. These symptoms continued for two days, when the patient was sent to hospital for operation. On admission to hospital patient presented a cyanotic appearance; was breathing rather rapidly and shallow and presented the appearance of being in a serious condition. The abdomen was remarkably distended and tympanitic throughout. There was marked sensitiveness in the right upper quadrant and some rigidity of the rectus muscles. The rigidity yielded, however, to pressure and the sensitiveness was not greatly increased with the fingers pressed deeply into the gall-bladder region. The liver did not seem to be enlarged, and the appendix region did not seem to be particularly sensitive, and showed no evidence of a tumor mass. The picture presented by the abdomen was strongly suggestive of an abdominal lesion, but the attention was at once directed to the chest by a rapid and catchy type of breathing, and a well-marked cyanosis. The patient had a

labored shallow breathing, which was not of the type usually seen in acute peritonitis.

Physical examination of chest showed moist rales throughout right lung. Percussion over the right lung gave definite dullness in the lower half. The breathing over this region was unmistakable at this stage of the disease and a diagnosis of pneumonia was made. The patient continued with a very severe typical pneumonia and died.

CASE 2. Man aged 60, bookkeeper. On admission patient showed temperature of 101; pulse, 118; respiration, 36.

Physical examination showed rather fat man with appearance of previous vigorous health. Face showed slight cyanosis. Respiration was labored, and patient grunted much as he breathed.

Chest anteriorly showed no abnormalities. Posteriorly there was slight dullness on percussion below the angle of the scapula on the right side. Auscultation over this area showed broncho-vesicular breathing and some crepitant and subcrepitant rales. Abdomen greatly distended, indeed almost ballooned. Palpation elicited marked pain above umbilicus, particularly in right hypochondriac region. The abdomen was so much distended that nothing beyond sensitiveness could be determined. There was no sensitiveness below the umbilicus. Urine on admission was acid, specific gravity 1030; there was a trace of albumin, and many granular and epithelial casts. The opinion was strongly expressed by myself that this patient was suffering from pneumonia, but a consultation of four able medical men was so strongly in favor of serious acute trouble in the upper half of the abdomen that an exploratory incision was decided upon.

A right rectus gall-bladder incision was made at 6 p. m., March 1, 1908, and the gall-bladder, stomach, pancreas, appendix and kidney rapidly examined. Nothing was found beyond extreme distension of the gut and the incision was closed. The pulse and respiration became very rapid during operation, but promptly came back to 120 and 28, respectively, after operation.

The patient was very restless, vomited much during the night and coughed up some blood-stained mucus. During the following day respiration ranged from 40 to 50; temperature 101 to 103 F.; pulse from 128 to 140. He vomited large amounts of clear fluid, was more cyanotic than on the previous evening and looked very badly. In the evening the vomited material became dark red in color, then dark brown, and vomiting occurred every thirty minutes or oftener.

Temperature remained about 103 F.; pulse, 132-136; respiration, 32-40. On the following morning, March 3, all conditions were unchanged and

pulse became much weaker. The chest symptoms were still not pronounced and abdominal distension was so great, and the condition of paralytic ileus was so marked that an enterostomy was decided upon. This was done under cocain anæsthesia by opening up one end of former wound and without apparent shock to the patient. The condition of the patient grew progressively worse and he died at 2:45 p. m. on March 3. A post-mortem examination revealed a well-marked pneumonia in the right lower lobe and no abdominal lesion beyond an extreme distension of the intestine.

CASE 3. Man, age 65 years, married, farmer. On January 15, 1910, about 5 a. m. this patient, who had previously been in perfect health, fell through a small hole in the hayloft and struck his right side on the side of the opening. He suffered intense pain in the chest in the region of the seventh and eighth ribs; was helped to the house, and when his physician saw him two hours later he was suffering greatly from pain at this spot, which was aggravated by breathing. His physician found abrasion of the skin over the region of the seventh and eighth ribs, and a fracture of these ribs. The pain was relieved by morphine and strapping of chest. He suffered some pain during the day, but rested well that night and the next morning. About noon of January 16th,—thirty hours after the injury—he began to vomit a brownish, black material in very considerable amounts, and his abdomen became distended and tympanitic, but there were no points of tenderness. There was no fever, pulse was rapid and of good quality. The bowels had not moved since the accident and could not be moved by salts calomel or enemata. This condition persisted unabated during the night of January 16 and during January 17 until I saw him on the evening of January 17.

PHYSICAL EXAMINATION. Patient is a very fleshy man, of medium height, short neck, who is breathing rather rapidly and appears to be struggling for breath. The face is cyanotic and the skin generally rather dusky. Physical examination of the chest shows the heart to be fairly normal and the chest posteriorly shows fairly normal resonance on the left side except for the lower half, where it is somewhat modified. On the right side there is a definite dullness below the angle of the scapula. Auscultation shows rales throughout both lower lobes, but particularly marked in the right lower lobe. The breathing is bronchial over right lower lobe. Abdomen is tremendously distended and tight as a drum. There is some sensitiveness over the entire right half of the abdomen; slight sensitiveness generally. Ab-

domen is so tense that no definite localization of pain can be determined. As the examination is made the patient vomits a black-colored fluid in large amounts. Temperature was 96 deg.; pulse, 120; respiration, 50. A diagnosis of acute lobar pneumonia was made.

I was called in this case because it was considered that the patient suffered from intestinal obstruction or a rupture of some viscus. The abdomen was so generally and extensively tympanitic that it was not possible to examine the different organs accurately, but I felt certain that we could exclude laceration of liver and extensive hemorrhage from the fact that his abdominal symptoms did not come on for more than thirty hours after the injury. Furthermore, the patient did not present a picture of collapse from hemorrhage nor were there any physical signs of any amount of blood in the abdominal cavity. I felt that we could exclude rupture of the intestine from the fact that the injury had been received on the right side in the region of the seventh and eighth ribs and that the force of this blow was necessarily transmitted through the mass of the liver to the abdominal cavity. This fact would seem to make it almost certain that the force would be very diffuse and much scattered when it reached the abdominal cavity. The regurgitant black vomit, which was certainly fecal in character, the extreme distension of the intestine, and the fact that the bowels could not be moved suggested intestinal obstruction strongly, but it seemed to me that the obstruction was due to paralytic ileus. The question remains open, however, since an autopsy was not secured. This patient's condition constantly grew worse, his temperature became more elevated and he died within eighteen hour after my visit; about seventy-six hours after the accident, and forty-eight hours after the onset of his acute abdominal symptoms. This man's condition was so bad at the time I saw him that an exploratory incision to make certain of the presence of abdominal lesion was entirely out of the question. I am convinced, however, that this patient's primary and essential lesion was pneumonia.

CASE 4. A young man 29 years of age, admitted to Cincinnati Hospital January 31, 1910, as a case of acute appendicitis and sent to the surgical ward. His sole complaint on admission was abdominal pain, and his family physician had sent him to the hospital as a case of acute appendicitis. This patient had been perfectly well until the previous evening at 6 o'clock, when he was taken with severe pain in the abdomen, fell to the street and had to be carried to a physician's office. He continued in great pain during

the night; had some cough with slight prune-colored expectoration and some pain in the chest. He did not vomit. His pain continued over the entire abdomen until his admission to the hospital when his temperature was 104 degrees; pulse, 96; respiration, 40.

PHYSICAL EXAMINATION. There was hyper-resonance at right base anteriorly. Resonance diminished to base of right lower lobe but no area of dullness. Left lung normal. The breathing sounds were likewise normal over the left lung. There were a few crepitant rales at the base of the right lung and a mild grade of bronchial breathing. The abdomen was flat, there was no distension. Palpitation showed the recti muscles were very rigid indeed and the entire abdomen was extremely sensitive to the touch. There was, however, no special point of greatest sensitiveness, even though the subjective symptoms of pain were greatest on the right side. The remainder of the examination was practically negative.

A provisional order was given to prepare the operating room for an emergency appendix operation, but Dr. Arthur Silver, my house surgeon, observed the case for about two hours and came to the conclusion that the patient was suffering from a beginning pneumonia. This conclusion was verified shortly by the presence of the rusty sputum in fairly large amounts. When I saw the case about four hours after admission the physical signs had developed so rapidly that I could only concur in the diagnosis already made by Dr. Silver. Patient was transferred to medical service and made a good recovery.

It will be observed that in this case the patient's symptoms were entirely abdominal for twenty hours. Even then the symptoms were so slight in the chest that a painstaking examination revealed little beyond a few rales and some modification in resonance in the right lower lobe of the lung. A hasty decision might very easily have been made to open this abdomen within the first eighteen hours for acute appendicitis.

CASE 5. Colored man, aged 36, laborer, admitted to Cincinnati Hospital February 1, 1910.

This patient had twice before been in Cincinnati Hospital on the medical side, where he was treated for gastric ulcer. Twenty-four hours after his present admission, again on medical side, he was taken with very severe pain in the epigastrium, which was associated with abdominal rigidity and profound shock. A diagnosis of perforated gastric ulcer was made and he was promptly transferred to the surgical service for operation. At operation no perforation was found, but an extensive cicatrix in the lesser cur-

vature of the stomach near the pylorus marked the site of his previous ulceration and caused definite stenosis with dilatation. A posterior gastro-enterostomy was promptly done and patient made a perfect recovery without a single unfavorable symptom.

On the fourth of March, after having been out of the house for the afternoon this patient was suddenly seized with very severe pain in the abdomen and vomited several times. His abdomen became markedly distended and his bowels could not be moved by enemata. His pulse was rapid, and temperature normal. He presented a picture which perhaps was more like acute intestinal obstruction than anything else. The chest was entirely negative at the onset and remained so for several hours. The following morning the abdominal symptoms continued in their acuteness, but the respiration was more rapid. There was some cough and definite signs of consolidation in the lung. A diagnosis of pneumonia was made by Dr. Silver and patient was transferred to medical side.

This patient continued with a very severe lobar pneumonia and died six days later.

This patient had quite a number of lesions, most of which do not concern us in the present report. The first severe abdominal pain which led to his operation under the mistaken diagnosis of perforation was explained on a basis of gastric symptoms resulting from pyloric stenosis. This conclusion would seem to be justified by the fact that he was completely relieved by the gastro-enterostomy, and was able to eat all articles of food without the slightest discomfort. This he had not been able to do for a long time. The second attack of severe abdominal pain and collapse was entirely different from the first, was so definitely followed by the development of pneumonia and subsided so promptly within a short time without special treatment that it would seem safe to conclude that they were produced by the pneumonia. Furthermore, autopsy showed no abdominal lesion.

A review of the literature on this subject would seem to show that the condition is by no means infrequent. Surgeons of wide experience and unquestioned ability have committed the error of operating upon the abdomen, and it would seem from a review of the cases reported, and from my own experience, that this error is at times unavoidable. The burden of responsibility in this type of case is certainly great, since the error of allowing a bad appendix to pass over unoperated is quite as great and the dangers to such patients are certainly much greater than

those imposed by an exploratory incision in the presence of pneumonia.

An acute abdominal condition might very well develop coincidentally with an intra thoracic lesion or an abdominal complication might develop in the course of a pneumonia or the reverse might be true. The possible quick infection of the pleura from the appendicular lesion must always be considered. Richardson says "that even with an experience of hundreds of cases of appendicitis of all kinds, he is a bold man, who, in such cases, is willing without careful study and most searching examinations, to exclude appendicitis, even when the thoracic symptoms have been well recognized." He feels that excessive conservatism for fear of opening an abdomen for pneumonia or typhoid fever may at times be very costly indeed.

Realizing the difficulties of diagnosis, and the possibility of error, let us inquire as to how we can reduce the element of error.

The chief difficulty in the diagnosis is to remember that the necessity for the distinction exists. When one's attention is called to the possibility the diagnosis is usually easy. An incomplete history and physical examination will be as a rule the direct explanation of most errors. These cases usually arise as grave emergencies. The surgeon is called for an acute appendicitis—he finds a history of sudden onset with severe pain and vomiting, an elevation of pulse and temperature, the right rectus rigid, and he simply neglects all further examination of the patient.

These are certain points which will be of value as guides in the diagnosis:

(1) The countenance of the patient is not peritonitic, and there is apt to be some grade of cyanosis.

(2) The tongue is moist and not coated.

(3) Respiration is frequent—out of proportion to the pulse rate and costal in type. There is often a definite catch at the end of inspirations.

(4) Abdominal rigidity is less circumscribed than in appendicitis and is very great. The abdominal wall relaxes for a moment with each inspiration. This is looked upon as an important sign.

(5) Abdominal sensitiveness may be local, unilateral or general, but is always superficial. Deep pressure is not painful.

(6) A sudden high temperature (continuous) has been observed very frequently. This is not true in appendicitis.

(7) A careful objective examination of all organs is most necessary.

The explanation of the abdominal symptoms is not entirely clear. In many cases it seems most

probable that the pain, sensitiveness and rigidity are to be explained by an irritation in continuity of the lower six dorsal nerves. Irritation of the seventh, eighth and ninth nerves will cause pain in the epigastrium and will simulate gall-bladder disease or ulcer of the stomach, while irritation of the tenth and eleventh nerves will cause signs in the appendix region. In other cases the sensations are purely reflex and result from irritations originating in the lung, which are transmitted either through the costal group or through the vagus to produce visceral pains. The intestinal paralysis which has been very prominent in many cases has been explained by some as the result of a toxæmia; by others, as a reflex disturbance of the splanchnic system.

DISCUSSION.

R. B. Hall, Cincinnati: Reports of these cases are typical and coming under the head of emergency operations, and call attention to the very important element in dealing with emergency operations. I think the error could be made very easily in such cases, unless one does just what is recommended by the essayist—get a careful clinical history with your clinical examination. My experience has been in dealing with emergency operations is not to take too much for granted; if you have symptoms of acute intestinal obstruction or acute gall bladder disease, take time to get a clinical history and go over the case carefully. The cases reported remind me very much of what Billroth used to say in his clinic when he was at his zenith, in removing goitre; whenever he got down to the small pedicle and he felt that he wanted to clip it off with one cut of scissors. "Now, boys, go slow," he would say. Taking a little bit at a time, as he used to in these cases, emphasized the necessity of differentiating and getting a certain clinical history. I grant you the responsibility is very great to the consulting surgeon and the family physician. Do you know he has pneumonia or gangrenous appendicitis or perforated gall bladder or ulcer of the stomach? Was it your duty, under those circumstances to do as the essayist did, to open the abdomen when four consulting doctors who were experienced in internal medicine, recommended it? Yet the history indicated an exploratory operation. These cases are trying, but usually you can make a differential diagnosis. I can recall several cases now in my own practice where I have been up against the same proposition, but I believe the keynote of the whole situation is what the essayist emphasizes in his paper; first, a careful clinical history, and don't be in too big a hurry. If your train leaves in an hour and a half, wait until the next train, if you can't get a careful clinical history.

Now one thing not mentioned by the essayist: Do not hesitate in every case to put the patient under an anesthetic and examine the patient under its influence. There are few conditions of two days' standing in the abdomen coming up that you cannot locate the pathological point in the belly under an anesthetic.

J. F. Binnie, Kansas City: I cannot allow this opportunity to pass without thanking Dr. Whitacre for this most admirable paper. It is delightful to read a paper on a nice subject that some one else has worked up and give a bunch of statistics, but it is much more comfort to have a man get up and tell us of the troubles he has been up against. One point I wish to make in Dr. Hall's remarks as to the necessity of having the patient under an anesthetic for examination. We are examining for an acute condition; the pathological condition in the belly that we are examining for is no tumor; there is nothing palpable, and we must trust to the patient's feeling.

Dr. Skeel, Cleveland: I would like to know if a leukocyte count was made?

A Member: I would like to ask Dr. Whitacre why we have these symptoms simulating pneumonia?

J. H. Jacobson: During the last meeting of the American Surgical Association Dr. Roberts, of Philadelphia, pointed out a new symptom of appendicitis, in which he stated there was a congestion at the base of the right lung, and he interpreted this as being due to two causes; first, that the diaphragm is kept quiet during respiration, and secondly, an extension of the inflammation, perhaps through the lymphatics to the diaphragm to the lung. That would be a very interesting observation for us to look for in the future. For myself I have never found any of the so-called pathognomonic symptoms in the diagnosis of acute appendicitis, but I do believe these errors are due entirely to carelessness and sins of omission on the part of the operating surgeon. Even the authority quoted by Dr. Whitacre—Dr. Richardson—has reported a case in which he searched a long time for the appendicitis and couldn't find it, and then found a transposition of the viscera on the right side.

Another point I wish to make, in looking over the literature of these cases, is that these cases could have been differentiated by a careful physical examination and careful consideration of the classical signs of appendicitis. The only experience we have had along this line has been a case in which the intestine was nicked on opening the peritoneal cavity, and after a few days we thought we had a localized peritonitis and opened the abdomen again and found nothing. In about twenty-four hours the patient developed pneumonia, explaining the high temperature and rapid pulse.

Frank Warner, Columbus: It seems to me a little unfortunate that men should be bringing forward symptoms such as congestion of the base of the lung occurring in appendicitis when it means in reality that it was a mere coincidence. There is always a little tendency in those cases to immediately jump into print and have that known as "Mr. Jones' sign" of such and such a disease. It seems to me that is all wrong; and so far as congestion of the base of the lungs occurring in appendicitis, I think it is nothing more than a coincidence in some special case, and I think a thing of that kind should not be allowed to go unchallenged. They lumber our literature and we should call a halt to such work as that. As to always examining the lungs in these cases, I desire simply to say that I believe that is nothing but a delusion

and a snare, and if congestion of the lungs occurs in a case of appendicitis it is a mere coincidence and not the rule.

W. D. Haines, Cincinnati: As bearing upon the remarks of the last speaker, but a few months ago I saw a case in consultation with a gentleman, who had already made a diagnosis of perforation. The symptoms to me were those of perforation, diarrhea, vomiting, considerable muscular rigidity of the abdomen, etc. I examined the lungs very carefully in this instance, and he looked at me as if to question my diagnosis, but the next day our patient had a very grave pneumonia. We had two conditions existing in the same patient, so that it was like the old saw of typhoid-pneumonia or typhoid malaria; you make it out very nicely. My experience has been limited to this one case, but I couldn't make out a diagnosis until the next day.

L. G. Bowers, Dayton: I had a recent experience with pneumonia following operation—a case I had seen six months before in puerperal sepsis—it had been going on about three weeks. She came in my office six months after her puerperal trouble, and had some pelvic disturbance. Pulse was 96, said she had a little cold but had gotten over it. The doctor told me her heart was normally rapid. We had her in the hospital for three days, and I had the anesthetist to examine her lungs, but nothing was discovered there, and she was operated upon. Thirty hours after operation, her respirations increased to 32 to 36, and thirty-six hours she was spitting up rusty sputum and soon she had a double pneumonia. I believe that pneumonia was already on her even at the time I examined her, and the rapid action was due to beginning infection.

H. J. Whitacre (closing): This is a subject which interests me immensely, and I think this discussion will clarify the subject in all of our minds. I want to say in the first place that I do not wish to cast any reflection upon the physicians who have called me in in these cases; the point I wish to make is that the condition is so confusing that a diagnosis is often impossible, and that these physicians have been justified in calling for consultation to determine the accuracy or fallacy of their suspicion. Now the statement has been made that these cases should be diagnosed in each and every case if careful physical examination has been made. If the gentleman making the statement will review the literature I believe he will find a number of cases in which there were no physical signs, even though a careful chest examination was made two to four days after the onset of symptoms. Furthermore, it must be remembered that these cases usually come in as sudden acute emergencies. You cannot sit around and wait for 24, 48 or 72 hours to see whether something is going to develop.

I really wish to agree with Dr. Binnie in his remarks relative to the use of an anesthetic. I feel that at the time you are called in these cases there is not time enough for exudate to be felt around the appendix. There isn't enough there-in to feel obstruction of the bowel. Relative to blood count, I will say that so many of these cases have occurred as acute serious emergencies, several of them in the country and others

coming in for immediate attention, that the blood count has not been made in any one of them.

Now as to the explanation of these symptoms. The most rational explanation to me seems to be an irritation in continuity of these costal nerves—a real involvement of the nerve—a true neuritis of the nerves contiguous to the pleura and lungs. This seems to be borne out by the fact that many of them have been cases going on to operation for pus after an intense type of pneumonia. So that it is possible to have, as a rule, irritation in continuity and by contiguity of these costal nerves. Again the reflex may come through the lung out along the rames communicantes, then down the costal nerve or down the vagus, and that would give us a reflex.

Now I feel too that Dr. Warner has made a good point. We all know in appendicitis of the great danger of secondary infection of the pleura.

THE NEED OF BETTER PROVISION IN OHIO FOR THE CARE AND TREATMENT OF ACUTE MENTAL DISEASES.

H. H. DRYSDALE, M. D.,
Cleveland.

[Read before the Ohio State Medical Association.]

It is only in recent years that the rays of science have been able to penetrate and expose the true nature of disorders of the mind. A little over one hundred years ago psychiatry was beclouded in demonology and witchcraft and the insane were branded as victims of God's wrath to be exiled and tortured and in many instances cruelly put to death. Finally, Pinel in France, Tuke in England, Jacobi in Germany, and Rush in America laid the foundation for the wonderful progress that has been made along these lines. Facing bitter and persistent opposition they fought for the liberation of these shamefully abused unfortunates on the grounds that they were sick people and like those physically ill were in need of every aid which science and benevolent sympathy could offer. The record of these brave physicians deeds in behalf of the mentally deranged is indelibly a part of medical history. And while this movement for the rehabilitation of the insane has gone slowly but steadily forward, no material advancement was made until 1850, when the building of state hospitals began. Since that time the reforms introduced have attracted world-wide attention and without egotism it may be stated that the time is not far distant when the humane methods as practiced in the United States will be a standard which other countries will endeavor to emulate. It is interesting to recall the many improvements inaugurated during the past decade. In

my brief institutional and private career I have seen barred windows removed, mechanical restraint disposed of, pathological laboratories installed, hydrotherapeutic measures adopted, diet kitchens developed, the "open-door system" established and even the word asylum discarded by that more charitable term, hospital. All of these are noteworthy and commendable and in keeping with the universal spirit of progress. In this connection our state superintendents have been most conspicuous and to them is due unstinted praise and credit. Just now we are at a standstill as it were. We must be up and doing. This great commonwealth cannot afford to lag behind in this significant twentieth century advancement. In years gone by our chief concern as a profession was the discovery of the cause of disease. To-day our great responsibility is prophylaxis. We are in the midst of a campaign of preventive medicine—witness the reports emanating from the distinguished gathering held recently in Washington, the International Congress on Tuberculosis. As with tuberculosis a few years ago, so it was with insanity. We were taught to look upon these disturbances as incurable visitations, and as a consequence many patients were lost or permitted to enter a state of mental lethargy. Conditions, however, have changed and certain irrefutable facts are in our possession. It is positively known that much may be done to prevent the spread of alienation. There is indeed no other branch of medicine in which prevention is of greater value. The proposition to be dealt with is not the giving to those bereft of their reason comfortable surroundings, but immediate medical attention so that their chances for recovery may be substantially enhanced. In other words, if we are to cure more of these patients we must have them under observation in the very incipency of their disease. The time has come, I believe, when some decisive action is necessary if we hope to ward off the gradually increasing number of hopeless insane, and in this respect the medical fraternity must take the initiative. Let us then approach the problem in its various phases and consider respectively why such provision is so urgently needed.

1. When an individual in Ohio develops a mental disease and requires institutional care it is obligatory for some friend or relative to make sworn complaint in the Probate Court that such person is insane. A warrant is then issued for his arrest by the sheriff and he is brought into court. If, as frequently happens, the condition of the patient is doubtful, additional testimony is called for and pending final adjudication the alleged sick person must remain in the county jail

among criminals and is practically held as such. Surely the inhumanity of such a procedure must prejudice an insane patient's chance of recovery.

2. Not less than 60 per cent of the present insane in hospitals are what are termed chronic or infirm. Some of these cases have been wards of the state for over twenty years. The principal reason for this, I believe, is attributable to the deep-rooted tradition that has led people all these years to look upon insanity as a disgrace to be hidden in the "family closet" and as a result many curable cases have been detained in their homes under unfavorable circumstances until the opportunity for amelioration had passed. It is quite common to commit to the state hospital persons whose mental invalidism is of several year's duration.

3. In Ohio we have seven public institutions caring for about 12,000 inmates. Most of these hospitals are of the custodial massive type and in none of them does the average population fall below 1000. Individual study and repeated examinations are essential if cures are to be had and it is beyond the bounds of reason to expect that a staff of five medical officers can give to the very large number of cases allotted to their care the thorough attention necessary to produce the best results. In this progressive era the entire services of these medical men should be devoted to the care of the sick and investigations of a truly scientific character and not to matters of an executive nature.

4. It is universally acknowledged that the acute and favorable cases should by no means come in contact with the institutionalized mass of advanced patients, but should receive first care in a more hopeful environment. Mental patients are sick patients. Such persons are ill because their nervous systems are permanently or temporarily deranged. They also suffer from other disorders, in some instances prior to and leading to insanity and very often as a result of nervous and mental disease. So inasmuch as the insane are physically ill of a malady which in the early stage of many of its forms is curable it is only just that such persons be as humanely treated as other sick people and on a similar basis.

5. A very large percentage, probably 20 per cent, of individuals found to be legally insane recover in a remarkably short time. This is particularly true of the alcoholic psychoses, transitory confusion, excitement and depression. A great many of these cases clear up within two weeks and instead of committing them they are permitted to convalesce in the custody of the sheriff. But these unfortunates have not escaped

the stigma of insanity and they go out into the world with additional burdens to worry and harass them. Very often the reflection of their former experience is sufficient to provoke a recurrence. If such mental weaklings could have been placed in a less hope-deserted atmosphere they would have recovered more promptly and taken on new hope resting assured that should appeal for help would not mean imprisonment.

6. Then we have that large class of developmental cases who are aware that their mental condition renders them unsafe to be at large, but who will not consent to institutional restraint. I have had considerable experience with patients of this type. They were borderline cases, and it would have been a most difficult matter to commit them as they readily could convince almost any jurist of their apparently rational intellect. Several of these, morbidly impulsive, suicided and their lives were needlessly sacrificed. So long as we remain unprepared to extend prompt relief in periods of acute mental distress, calamities such as these will continue to shock us.

7. It is a regrettable fact that in no department of medicine is the practitioner so poorly trained as in psychopathology. Even today students of a number of colleges graduate without having received practical psychiatric instruction. This certainly is a sad commentary upon our educational methods. In carrying out the plan advocated in this paper, these short-comings could be corrected by extending to a large number of physicians and students competent training to the end that they may go out better equipped to treat brain disease in its most curative stage or prevent its development by advice which they alone are privileged to impart.

8. A hospital to be successful must come in close contact with the people and be alive to their many requirements. This is not possible in our mammoth institutions which unfortunately are inaccessible. The laity should have a full knowledge of the purposes and methods of treatment, as well as a keen appreciation of the difficulties encountered in dealing with these trying cases. In this way a better understanding of each other would dissipate erroneous impressions and develop and beget mutual confidence and esteem. This is as it should be and the profession of medicine should exert every influence to create such a standard.

9. If the tone of several editorials which have recently appeared in representative newspapers is a criterion, public sentiment is very much opposed to the method pursued in criminal cases wherein mental inadequacy is offered as a de-

fense. Most attorneys and many alienists are agreed that this system of expert medical testimony, as it relates to crime, needs drastic revision. In the first place the ordinary jury is not competent to decide intricately technical subjects. Secondly, problems of this import should be determined before the trial by competent physicians called to give an impartial opinion and not as advocates for the side which retains them. It has actually come to pass that if the medical man will not agree to testify as directed, his services are no longer in demand. Equally condemnatory is the practice of subjecting an insane person to the ordeal, strain and excitement of a protracted legal conflict. It may not be generally known, but it is nevertheless true, that several prisoners whose defense quite properly was mental enfeeblement, were found guilty of crime and are now in the insane department of the penitentiary eking out a pitiable custodial existence.

You have heard the evidence. Only one effective remedy is apparent. This will be found in the organization of a psychopathic hospital of some kind in every large city or institutional district. Legislation could be enacted permitting a hospital of this character to receive without judicial sanction or police interference, all mental cases for first care preliminary to distribution to appropriate institutions when necessary. Such provision would remove the stigma so-called attached to the ordinary court commitment which most people keenly dread. The principles underlying this movement are by no means new but on the contrary have been the guiding factors in the modern tendency of hospitalizing institutions for the insane. Various views have been expressed as to the most practical way of securing these facilities. Some authorities recommend an independent psychopathic building, others a special ward in a general hospital, while many advocate an "acute cottage" as a part of the state hospital. All of these plans have their advantages and disadvantages. Objection might consistently be made to an independent building in view of the expense. As to the state institutions, they cannot as at present conducted supply the demand. For one reason the aggregation of a large number of patients would decidedly endanger its successful performance. Furthermore a quasi-political atmosphere pervades these establishments and this too, detracts from the true hospital spirit. Personally, I strongly urge a small separate ward in connection with a well arranged general hospital, convenient and accessible to medical schools. This I am sure would be the ideal solution. A ward of this nature would

receive incipient mental cases with the same freedom as the sick and injured are admitted. It would also permit of the organization of an efficient staff to examine all cases in which the mental responsibility of an individual is under debate and of the submission to the courts of formal reports based on actual observations to supercede the hypothetical expert guess that so frequently is a parody on justice. Doubtful cases in the jurisdiction of the Probate Court would be studied and humanely treated in the same manner. Arrangements could also be made for the development of an out-door department where many patients in the pre-insane stage of acute mental disease could receive skilled individual care at a time when there is great hope of cutting short an attack of mental aberration. Many patients dismissed from the state hospitals as cured are oftentimes in need of prompt assistance and with the convenience of a psychopathic ward at their disposal a system of after-treatment would be of great advantage. In this manner the tendency to recurrence would be diminished and the number of chronic insane ultimately lessened.

Most alienists are agreed that incipient mind disorders cannot be successfully treated in the ordinary home. They are proper hospital subjects. A great many of them present manifestations of exhaustion and toxæmia and should be as considerably cared for as in acute general diseases arising from the same causes. Surgical cases complicated with mental symptoms also have a legitimate claim on the hospital plan. History demonstrates the inevitable growth of demand for such facilities. We must yield sooner or later to this universal cry. Local hospital managers are obdurate in their refusal to accept these patients on the assumption that they will disturb other sick persons. This objection, however, does not seem to be well taken. The majority of early mental cases have a very clear insight into their condition and are most eager to co-operate with the physician to effect a cure. As a rule they are as easily handled as those physically ill and it might be well to emphasize that the acutely disturbed or restless ones are to quite an extent artefacts, aggravated by injudicious management by the friends and by those who are called to attend them. If we as medical men are sincerely desirous of doing our full duty towards mankind some definite action should be taken at once. The general trend of thought is focussed in this direction and I sometimes feel that if we do not do our part the laity will step in and do it for us. So imperative is the need

of better provision for the modern treatment of the acute and curable insane, that it is to be hoped nothing will stand in the way of its development.

No. 846 Rose Building.

DISCUSSION.

K. S. West, Cleveland: I congratulate Dr. Drysdale on his paper, which gives so many good and sufficient reasons for better and more scientific observation and treatment of this large and increasing class of unfortunates. The ideas which he advances are not necessarily new ones since this need has long been felt in this country and has been to a certain extent reduced to practice in many states. It was originated primarily in Scotland as long ago as 1880, at which time they made provision for the retention and early treatment of incipient cases by placing them in an institution where they could be given such care as would possibly prevent them from possibly becoming a burden on the state.

Dr. Drysdale has given us about ten separate and good reasons for the establishment of this early and first care. These reasons I think can be reduced to about three; and therein embrace sufficient need to justify improvement in our present system; first, the establishment as already mentioned of a place for proper detention of people whom we know must necessarily be committed to a state institution, and who without such provision are subject to a jail confinement with the surrounding distasteful conditions and unfavorable first impression often made on hopeless cases.

Second, there should be a place for the proper treatment and possible prevention of commitment to a state hospital, where these people could receive treatment intelligently directed, and where they will be taken care of according to the most modern methods of treatment at a stage in which a cure is most likely, since insanity is recognized as a disease most amenable to treatment in the earlier stages. Of course there are many recoveries which occur later, but delay usually involves an essential deterioration of their condition in most instances; so that treatment in the earlier stages is rational and the only one which is favorable for good results. A general hospital cannot do the work of the state hospital, and the state hospital cannot do the work of the general hospital; but there are many mental disorders in which the physical condition of the patient requires general hospital treatment, and there are many physical disorders with mental complications, which can also be treated in a general hospital.

Third and last, as has also been mentioned, is the clinical advantage provided for medical students and the profession in general and an opportunity to come in contact and become more familiar with mental disorders, so that they will thereby be more capable of recognizing and caring for such cases in their incipency and of pro-

viding the prophylactic measures necessary for the prevention of many alienations and ruined possibilities.

David I. Wolfstein, Cincinnati: The pleasure of discussion usually lies in the opportunity afforded for differing. I would rather say that we have not any opportunity here except to agree. This paper ought to be looked upon I think as a sort of tract. It ought to be the means of a great deal of missionary work.

I have always felt exceedingly distressed at the unjust divorcement of neurology from its relations to general medicine; and in our modern institutions where these facts are better kept in mind it cannot but be a very great advantage to the ordinary general department of medicine as well as to neurology, if this unjust separation of the two branches could be restricted.

The essayist has dwelt largely on the fact that in so many institutions for the insane there is no opportunity for the scientific study of these cases and a more widespread knowledge of the underlying physiological and neurotic conditions is neglected from the fact that our institutions are so largely administrative and not used for teaching purposes. When one reflects upon the wonderful work done on the continent of Europe where these neurological or nervous manifestations of psychic disease are carefully studied, and also recalls the fact that in our country in only a few places is this being done, it is really cause for sadness. The unjust imputation which rests on neurology and the assumed hopelessness of these cases, it seems to me ought to be dissipated. There is no better place to do it than in the medical schools. We ought to work constantly for the establishment of such psychopathic wards in connection with general hospitals and for the encouragement of more cordial relations between this and the other departments of medicine. The main advantage of this paper I think will be in calling the attention of medical men generally to this and to insist that their students be afforded better opportunity to study mental diseases not only that they may take greater interest in the nervous system, but also in the mental side of medicine; because when one reflects he sees that so much of our physiology is closely related to the nervous system, and that possibly no better way of studying it can be afforded that will be productive of so much advantage to the general profession of medicine.

I think, gentlemen, that we should in our medical sections ventilate this question and also try to counteract the deficiencies of which I have spoken, so that we will have a better discussion at our meetings of the various phases of psychic and nervous disorders and thereby benefit ourselves mutually very much.

Chairman Hoover: Is there any further discussion of this paper? If not, we will ask Dr. Drysdale to close the discussion.

H. H. Drysdale, Cleveland: Mr. Chairman and Gentlemen—I have nothing to add. The discussion stands for itself.

BOOK REVIEWS

THE PROPAGANDA FOR REFORM IN PROPRIETARY MEDICINES. Sixth edition. Containing the various exposes of nostrums and quackery which have appeared in *The Journal of the American Medical Association*. Price, Paper, 10 cents; Cloth, 35 cents. Pp. 292. Illustrated.

This book presents in convenient form most of the exposures that have appeared in *The Journal of the American Medical Association* showing fraud either in the composition of various proprietary preparations or in the claims made for such preparations. Not all of the products dealt with, however, are such as are—or have been—used by the medical profession. Many preparations of the "patent medicine" type have been subjected to analysis and the results of such examinations appear in this volume. The book will prove of great value to the physician in two ways: First, it will enlighten him as to the value, or lack of value, of many of the so-called ethical proprietaries on the market; and second, it will put him in a position to answer intelligently questions that his patients may ask him regarding the virtues (?) of some of the widely advertised "patent medicines" on the market.

MODERN MEDICINE—ITS THEORY AND PRACTICE. In original Contributions by American and Foreign Authors. Edited by William Osler, M. D., regius professor of medicine in Oxford University, England; formerly professor of medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. Assisted by Thomas McCrea, M. D., associate professor of medicine and clinical therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 900 pages each, illustrated. Volume III, "Diseases of the Nervous System, Mental Diseases, General Index." Just ready. Price per volume, \$6, net; leather, \$7, net; half morocco, \$7.50, net. Lea & Febiger, publishers, Philadelphia and New York.

The subject of this volume, "Diseases of the Nervous System," is covered in a most comprehensive manner, and thoroughly systematized. The editors have selected for each chapter a writer who is the highest authority upon the particular division of the subject with which the chapter deals.

The chapter by Baker, an "Introduction to Diseases of the Nervous System," especially to be commended and a careful reading of this chapter will do much to simplify a subject usually regarded as very difficult.

Chapters by Thomas on "Diseases of the Cerebral Blood Vessels," by Cushing on "Tumors of the Brain and Meninges," and by Burr on "Neurasthenia." "The Traumatic Neuroses and

Psychoses" might be selected from among the twenty-one excellent chapters which comprise the work as being entitled to special mention.

The volume covers the entire subject of nervous diseases as completely if not more so, than any work in English. Many good illustrations are given; the photographs from life illustrating many of the rare diseases are of value and add much to the practical usefulness of the work.

There need be no question but that this volume will rank well with the preceding volumes of modern medicine.

PROGRESSIVE MEDICINE; a Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, assisted by H. R. M. Landis.

The volume presents articles by Frazer on "Surgery of the Head, Neck and Thorax," by Rurah, on "Infectious Diseases," including rheumatism, croupous pneumonia and influenza, by Crandall on "Diseases of Children," by Kyle on "Rhinclogy and Laryngology, and by Ducl on "Otology."

These articles are all written in the usual comprehensive manner, which is characteristic of "Progressive Medicine," and each presents an exhaustive resumé of the literature upon the subject in hand for the preceding year. Like preceding numbers of this work this number is of inestimable value to the busy medical man whose time for reading medical journals is limited.

A very important matter in this connection is the careful system of reference to the original article.

DISEASES OF THE NOSE, THROAT AND EAR, AND THEIR ACCESSORY CAVITIES. By Seth Bishop, M. D., D. C. L., L. L. D., professor of diseases of the nose and throat and ear in the Chicago Post-Graduate Medical School and Hospital, surgeon to the Post-Graduate Hospital, and to the Illinois Hospital, etc. Fourth revised edition, illustrated with ninety-four colored lithographs and 230 additional illustrations. F. A. Davis & Co., Philadelphia.

This volume has been previously reviewed so that there is little more to add, save to remark that four editions in so few years are an evidence of the favor with which it has been received by the profession, and that the work deserves its popularity. This edition has been carefully revised and new material added to bring it up to date. The original form has been retained, so that it still presents its subject matter in a condensed yet lucid and graphic manner. It is well mounted and well illustrated.

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THE TOLEDO MEETING.

The sixty-fifth annual meeting of our state association has passed into history, and will always be a pleasant and profitable memory to all those so fortunate as to be present.

The registration did not reach the hoped for thousand, for which probably the unpleasantly cool weather was partially responsible, but the attendance was large, and characterized by unusually earnest interest in the section programs and discussions.

The programs of the various sections were largely carried out as published. Essayists were on hand at the appointed times and prompt and lively discussions were the rule. The writer visited every section and was much impressed by the excellent attendance at each, and the interest and enthusiasm displayed. No meetings seemed to drag, everything went with a "snap" which showed the active interest of those present. The general meeting on Thursday was characterized by the same spirit. The attendance was excellent, and while Dr. Anders' absence on account of illness was a source of universal regret, the two speakers who were present more than fulfilled the lively anticipations of the hearers. Dr. J. F. Binnie's address will be found in this is-

sue of THE JOURNAL, so that nothing further need be said, except that in reading it one fails to get the full measure of the charm of the personality of the author as he appeared before the meeting in Toledo. Dr. Hugh T. Patrick's address will long linger as a happy and profitable memory to those present. Homely and practical, forceful and humorous, he held the attention of his audience every minute of the hour allotted. In the sections the special speakers were all great attractions and added much to the enjoyment of the members.

The various social entertainments were a great success. The play of Dr. Dan Milikin was a source of great pleasure to a house packed with members and their guests. The whimsical humor of Dr. Millikin is well known, and the excellent mounting of the play, together with the cleverness and pulchritude of the "Company" made it a very delightful addition to the program.

The smoker given by the Toledo Academy was a most enjoyable and informal function and thoroughly appreciated by the visitors. The alumni smokers also were new and very pleasant features which it will be well to perpetuate.

The annual banquet must not be overlooked; it was a great success in every way.

Faultless in appointments and service, a delicious menu, followed by excellent speeches, most of which were entirely impromptu, it was a delightful occasion.

All in all our Toledo hosts treated their guests royally and this meeting will long be remembered.

One of our distinguished guests remarked to the writer that he had attended many state associations and this was the best banquet and all around "the liveliest state meeting" he had seen. Another writes, "Looking back over my visit to Toledo, I am impressed with the fact that your state society is the best society which I have visited, and I feel it a high honor to have been invited to address such a gathering." We had suspected this before but it is pleasant to have such unsolicited outside views.

THE OPTOMETRY BILL VETOED.

In vetoing the optometry bill Governor Harmon has again demonstrated that the good of the people and the observance of the law are to him of paramount interest. For months inspired articles in the daily papers have endeavored to work public opinion into the belief that the optometry bill is wholly for the best advantage of the people. It is not necessary to go over the arguments, nor to show how false the reasoning of the "Optometrists" has been. This subject has already been discussed in *THE JOURNAL* and attention drawn to the experiences in states where similar bills have been passed.

The main interest in the matter to physicians aside from the protection of the public, is that the measure was a direct onslaught upon the Medical Practice Act, and had it been approved, it would have led to similar assaults all along the line until our medical law would be emasculated, so futile, trifling, that it would be an utter farce.

The Governor's resumé of the subject and his reasons for vetoing the measure are the

best exposition of the subject up to date, and should have a wide influence in other states and in the future in Ohio for defense in similar attacks.

Briefly he disapproved of the measure because it sought to give a set of men without medical education authority to examine and license others in the anatomy and physiology of the eye and this he regards as a downward step leading to peril. He gives it as his view that such a board should be under the control of the state medical board.

His statement, however, is so strong and lucid, and shows such a keen and thorough appreciation of the subject that we append it in full:

To the General Assembly:

Amended Senate Bill No. 51, entitled "A bill to regulate the practice of optometry," creates a board of five members to examine and license persons to practice "optometry," which it defines as "measurement of powers of vision and adaptation of lenses for the aid thereof by any means other than the use of drugs, medicine or surgery."

The express exemption of mere dealers in spectacles and eye-glasses, and the requirement that the examination shall include "anatomy and physiology of the eye" as well as "optics and such other subjects as said board may decide to be suitable and proper" show that the proposed license is to cover something more than the mere commercial supplying of eye lenses to customers. That something is necessarily, from its nature, a part of the field covered by medical science. Our statute (G. C. 1286) includes in the definition of that field the prescribing, advising, recommending, administering or dispensing, for a fee or compensation, not only of drugs or medicines, but of appliances for the cure or relief of a bodily injury, infirmity or disease. It is beyond question that the eye is so connected with the general system that the subject of impaired or imperfect vision cannot properly be considered as though it were an independent function, and it is conceded that, especially with children, the condition and needs of the eye cannot, in a great many cases, be known without the application of

drugs for dilation, as well as the examination of other bodily conditions.

A STEP DOWNWARD.

So to set men who have not themselves had medical education and stood the careful tests required by law in the interest of the public health to examine and license others to deal with one of the most delicate and important organs, appears to me a step downward leading to grave peril. And if what may be called the mere mechanical treatment of defective vision is to be made a special branch of medical practice, it should be under the jurisdiction of the state medical board, so that the proper qualifications may be judged by men of approved education and training in the general science which deals with the ills of the human body. But I know of no special branch of medical practice which is itself split up as is proposed here. All other special branches are complete in themselves, and no one is permitted to engage in them unless he is qualified to diagnose and deal with cases in all the aspects they may present. One who is not skilled in optical surgery and medicine surely cannot be safely trusted to tell whether these are not required instead of the mechanical treatment he is able to give, and the time lost in discovering the need of these will often make resort to them useless.

SCHOOLS NOT ADEQUATE.

Schools of optometry are mentioned in the bill, but it is shown by the evidence presented to me that such as there are generally, if not always, lack the requirements of proper education for so important an art as treating the human eye. Many of them are mere correspondence schools.

It is quite true that dealing with vision ought to be strictly regulated, because, to common knowledge, much harm is done by itinerant and other persons who profess to supply the needs of the people. But I do not think this bill furnishes the proper means of regulation. On the contrary, by giving the authority of the state, many who lack the proper education and training, as this bill would, in my judgment, do, the public would be misled as to their qualifications. Those so lacking would undoubtedly outnumber those who merely by special talent and practice would acquire a certain proficiency, as men do in all callings. Drug-gists often gain a knowledge of diseases

and their remedies as extensive as some physicians have, yet they are not permitted to apply that knowledge in practice, because such cases are exceptional.

For these reasons I herewith file the bill with the secretary of state, unapproved.

JUDSON HARMON,
Governor.

May 17, 1910.

THE PHYSICIAN AND THE DRUGMAN.

The term drugman is used advisedly for the reason that in becoming a mere handler of drugs he has degraded himself to such a level as to be undeserving of the honorable titles of druggist or pharmacist.

The drugman is a mere vender of merchandise which requires no more expert knowledge than does the retailing of dry goods. The compounding of a few prescriptions and the selling of certain poisons makes it necessary for the state to insist on certain educational acquirements which the drugman uses for his own personal advantage in prescribing over the counter for physical conditions and diseases of whose pathology and proper treatment he knows absolutely nothing.

This man with unblushing effrontery uses newspaper space lavishly and over his own name certifies to the curative qualities of patent and proprietary medicines. He goes further and takes advantage of the fact that physicians patronize his store to get their supplies or to have prescriptions filed. He uses the confidence which ought to be sacred between the two professions of medicine and pharmacy to boost his business by getting public patronage.

He insists that the public can trust him because the physicians do so. To the injury of counter prescribing he adds the insult of parading personal or professional confidence to get business for himself.

All this and much more could be said of the iniquities of the traffic as it is conducted by the drugman. The situation especially in the smaller cities and villages has become

unbearable and physicians are beginning to cast about for a solution to this perplexing problem.

What the final solution may be it is impossible to foretell. In some towns every store engaged in the drug trade makes a public display of almost every patent medicine on the market. Patient entering such a place with a prescription have their confidence shaken in their own physician, a confidence very often necessary to successful treatment, by the glaring advertisements of the cure-alls on exhibition.

Of course, every druggist is not this kind of a drugman. He may sell a patient medicine, but he does not recommend it nor urge its sale. He does not prescribe over the counter for any disease whatever. If asked for a remedy he says go to your physician and find out what is your ailment; you do not know and I do not know.

Unfortunately, such men are scarce. The love of the almighty dollar is greater than the love of truth.

Occasionally you can find such a man. The action taken by the Shelby County Medical Society in the passage of resolutions, the text of which will be found in the report from the Second District, shows that one does business in Sidney, and the one mentioned on another page shows there is one in Columbus. Doubtless there are more in these towns and elsewhere and it is our place to make them known.

If our societies cannot get into the newspapers for the purpose of condemning and criticising the conduct of the drugman they can perhaps do better by praising the honorable druggist who is deserving of their patronage. A recommendation such as this goes a long distance with the public, and possibly points a way for a reform in the drug trade. If every county society in the state will earnestly endeavor to patronize only such men as are opposed to defrauding people by appealing to their credulity, the solution of this vexed question is not far off.

FIRST REPORT OF THE FRANKLIN COUNTY TUBERCULOSIS HOSPITAL.

The report of the first year of the Franklin County Tuberculosis Hospital has just been filed with the infirmary directors.

An analysis of this report shows that seventy-one patients have been treated in the hospital during the past year. These were classified as follows: Far advanced, twenty-four; advanced, twenty-six; incipient, nineteen; unclassified, two. The results show, improved, fifty-one; unimproved, nineteen, and cured, one. This report is, of course, only a preliminary one, but is an indication of the good which may result in time from these county hospitals. In such institutions where patients in all stages are admitted, one must not expect many cures. In this report the advanced and far advanced cases make up 70 per cent of the total, and of such practically nothing in the way of cure may be looked for, but three-fourths of these were improved by their stay in the hospital. Of the incipient cases, numbering but nineteen, one was cured and all the rest were improved. Some of these are still in the hospital and gaining steadily.

The report, therefore, is very encouraging and we will await further announcements with interest. It is to be remembered that the greatest good in these hospitals is not necessarily the number of patients cured, but rather the training of all these patients, and especially the advanced cases, in the use of hygienic measures, particularly in the habit of using sputum cups, the necessity of destroying sputum, and other measures so vital for the protection of the uninfected.

It is truly delightful to read reports of hospitals for the tuberculous showing large percentages of cured patients, but in such we may be sure the advanced cases have been rigidly excluded. It is of much greater benefit to the community at large to segre-

gate for a time and educate and train the advanced cases and *prevent* infection, than to wait and try to *cure* the incipient cases as they develop.

EDITORIAL NOTES

The following resolutions were presented to the Academy of Cincinnati last evening and unanimously adopted:

WHEREAS, Governor Harmon has shown by his veto of the Dean Optometry bill, a just appreciation of the purpose of laws regulating the practice of medicine; and

WHEREAS, By his veto of a bill supported by

powerful and persistent monied interests he has shown the courage of a true statesman; therefore be it

Resolved, That the thanks of the medical profession in Ohio is due the governor for his action in protecting the people of the state, from the designs of those who would exploit their ills for profit.

Resolved, That the president and secretary of the Cincinnati Academy of Medicine be instructed to forward copies of these resolutions to Governor Harmon, and to THE OHIO STATE MEDICAL JOURNAL for publication.

Very respectfully,

E. O. SMITH,

Secretary of the Academy.

THE SIXTY-FIFTH ANNUAL MEETING OF THE OHIO STATE MEDICAL ASSOCIATION

The sixty-fifth annual meeting of the Ohio State Medical Association was called to order in the convention hall of Hotel Secor, Toledo, at 10 a. m., on May 11, by President W. H. Snyder, who introduced the Honorable Brand Whitlock, mayor of Toledo, who made the following civic address of welcome:

"It is with great pleasure that I welcome the members of the Ohio State Medical Association to Toledo, and I should like to make my welcome more than a mere formality. I should like to be able to have you feel that it is a personal pleasure to me to be here and to perform this duty. Your profession is one which I suppose stands at the head of all the learned professions, at least in the point of progress. I myself have the honor to belong to a profession which has made no progress, so far as I know, in a hundred and fifty years; but you belong to a learned profession which has been continually making progress, and the progress that you are making is telling more and more for the benefit and upbuilding and up-lifting of human kind. Therefore it is pleasure that I take this opportunity this morning of expressing my respect and admiration for the profession which you so ably represent. You have conferred an honor upon us by coming here, as well as by electing one of our distinguished citizens as president. This is a good city, a kindly city, a clean city, to which we are glad to bid you welcome this morning, and gentlemen of your honored profession will demonstrate our welcome to you, and all will have their hearts and home open to you. I wish you during your stay here all the pleasure and profit imaginable, and that you will go away feeling that you have

done us good, and that we will be able to do you good. If there is anything in the city you want while here you have but to speak and you will get it. If any of you need any advice while here, please come around to the mayor's office. I get so much of it and have such an abundance left over every evening, that I can supply you any amount you may desire."

Wm. A. Dickey, M. D., in behalf of the Toledo Academy of Medicine, said:

"We are delighted to have you in Toledo. In behalf of the medical profession, I extend you one and all a hearty greeting. As the mayor has told you, we are extremely glad that you are here. We feel greatly honored in having you among us. I hope that your stay will be so pleasant and our hospitality at least sufficiently generous, that when in the future Toledo is spoken of as a place for meeting, not a dissenting voice will be heard. Our homes and our hearts are open for you. If you fail to see what you want, ask and it will be given you. The program is an indication of the work that will be done. This society has always been noted for the high characters of the papers presented, as well as the distinguished names that have appeared on its roll. Should I undertake to call the roll of the honored dead who have been conspicuous in this and the national association, I could do little else; the Hellenic mother said she would not give her dead sons for all the living sons in history, but not so for us. The living are doing equally as great work, and sometimes I think better. We need not carve the names of those who are today members of this society, whose work is not local merely, but national in its application. Occa-

sionally you will find an individual who says that the medical profession has done little or nothing to entitle it to recognition today. Standing on the threshold of the twentieth century, with the accomplishments of the last five and twenty years, think of the discovery of the malarial parasite, which discovery enabled us to build the Panama Canal. The French failed, not because they did not have sufficient means or skill, but because they could not rid themselves from that pestilential malaria. Think of the thousands of lives and the saving to commerce by reason of the modern treatment of yellow fever. Then compare the modern treatment of diphtheria with that of long ago. And in the Flexner serum I honestly believe we have a help for that scourge, cerebro spinal meningitis. There has been no reward but the knowledge of a duty well performed, and the commendation of him who said, "Well done, good and faithful servant." Think of the mortality of the battle field, because no Lister had yet arisen to teach us the rules of antiseptic surgery. Well may we wonder at the number of lives saved by better sanitation, and the children saved by better care and feeding. Nor is the end yet. With our faces steadily towards the future, let us look forward to the dawn of that resplendent day when the hope of curing and preventing preventable disease more certainly than in the past will have golden fruition."

President W. H. Snyder responded appropriately to the addresses of welcome in behalf of the Association, and then delivered the annual address of the president as follows:

"THE RELATION OF THE MEDICAL PROFESSION TO THE PUBLIC.

"There are three important matters of interest to the physician, and these refer to the relation between himself and the public. The first and probably the most important is his scientific knowledge. The second is his relation to his colleagues, both in ethical and scientific matters. The third is his connection with the general public, both as advisor and counsel in sanitation and hygiene, and regarding the laws governing the practice of his profession.

"The first is the only one of the three that has been settled and accepted in America, and it has been the effort of the parent organization to determine more definitely the relation of the physician to his fellow practitioners and the public. It is my belief that the most important thing at present is for the medical profession to fix more closely the second and third of these propositions.

"It is manifestly impossible for so complex and necessary a science as medicine, to live without a

certain amount of easy articulation with the public. I think it is a fact that will not be disputed, that the medical profession has lived too much within itself and has not spread its discoveries and ideals before the public to a sufficient degree. If this had been done more thoroughly, anti-vivisection, Christian Science, osteopathy, optometry and mental healing could not have gained ground, except with those who are mentally incompetent.

"Within the last year I have had many opportunities to discuss this problem with physicians all over the state, and a very small percentage of them still believe that the medical profession should isolate itself as much as possible from the public and should take no part in matters of public weal, except as it may be called upon professionally. They cite as the dangers of adopting a contrary course, that the doctor will lessen his scientific worth and that the men who will take the most prominent part in organization work are those of a less scientific knowledge; and therefore the trend of the medical profession will be towards a political clique. I cite this reasoning, that in fairness one may see both sides of the question; but I do not believe it to be a necessary difficulty. Today in Ohio the leaders in scientific thought are also leaders in organization, and they see that the necessity for putting their knowledge before the public is greater than ever; if they wish to be leaders of medical thought they must do more than to simply defend their doctrines when attacked. They must instruct the public in the scientific aims of medicine. Under the old method the doctor never addressed the public regarding his hopes and ambitions until backed against the wall, fighting for his life against some clique or measure, which had for its purpose the infliction of some unjust law that would practically nullify scientific progress. In nearly every instance where arguments were used early enough they had their effect; and the modern physician sees that the strongest ally he can have, especially in sanitation and hygiene, is the knowledge by the public at large of the value of his suggestions.

"Two of our well-known magazines, one a weekly, the other a monthly, have probably done more to educate the people along correct medical thought during the past two years than any other single agency at work. This is evident for several reasons. They reach a larger number of the people, who are largely visualists and must see in cold print what is intended for them to know; then, too, with their enormous circulation and the fact that they would be regarded as stating the case more impartially than the physi-

cians, it can be seen that their influence has been overwhelming.

"The time will come when the medical profession will be compelled to print a magazine for lay circulation along these very lines. In a recent number of the 'Printers' Ink,' the suggestion was made that physicians of the United States start a dignified co-operative advertising campaign. While the adoption of this plan would meet with tremendous opposition at present, the action of the American Medical Association in getting out its literature for public perusal, is a significant point as to the trend of modern medical organization. We must prepare the lay mind by stating the absolute truth before the necessity for using it arrives. I have found it remarkably easy in discussing these mooted points with laymen, to put it in such a way that they could see the absurdity of forbidding experimentation on lower animals, especially as it is now largely hypodermic injections of the various serums, and the majority of these animals being practically useless vermin. In other words, our campaign against such absurd laws should be carried on every day in the year. This brings me to the consideration of how this could best be done, and I am convinced that the time has arrived when we can no longer depend upon the gratuitous services of men to do this work.

"Most of the physicians who have executive ability enough to do this sort of work are too busy in their practice to devote the necessary time and I would suggest that this Association seriously consider the establishment of a bureau at Columbus, which would constantly be influencing the public thought through the newspapers, magazines and public addresses. I have seen the need for a greater appropriation for their work and feel that I can do no greater service to the medical profession of Ohio than to lead their thoughts along the lines of a more thorough and effective organization, to tell the public what our modern medicine is doing and hopes to do. The dues which have been paid to the State Society by the individual members are not sufficient to run a big medical journal, whose income is restricted by its inability to accept all sorts of advertising. If the special assessment were paid by every member it would be different; but a 50 cent assessment for each member, which should total \$2,000, actually brings in only \$700 or \$800.

"The legislative work needs the constant attention of a first class attorney, with necessary office force, clerks, and expenses of printing telegrams, etc., to be met, besides the work done by resident members of the committee. The appropriation for this work since I have been connected with

the committee has been so small, that if it cannot be made larger, I should advise its being abolished, on the principle that it is better to take no part in the political life of the state, than to take such an inefficient part that simply awakens renewed antagonism.

"My own plan would be somewhat as follows regarding THE JOURNAL. I think that every commercial house depending solely or in part upon the medical profession, should consider itself obligated to at least run a card in THE JOURNAL, but not at a large enough expense to render it burdensome. A number of these would relieve us of the absolute loss of editing this journal, which now amounts to several thousands of dollars each year. The dues should then be increased to a point commensurate with the dignity of a profession and the results we must obtain. When we think that the medical profession pays only \$1.50 as its obligation to the State Society, for which it receives a journal, it can be seen it is contributing very little for the support of a strong organization. Past experience has shown that the doctors cannot be depended upon to take charge of legislation in their own counties, and that some one must be hired who will devote his entire time to this important work. Every other branch of business or profession feels it incumbent upon itself to have an organization with sufficient financial resources to carry on constantly such legitimate work, and I believe this state should be the first one to make arrangements for an active "bureau of publicity," which would educate the people regarding medical progress and as to what is desirable for advancing medical science; and when certain legislation inimical to the public good is foisted upon it by some clique with selfish motives, it could show the people through its system of organization, the fallacies and dangers of such legislation. The simile could be drawn between the old-fashioned fire department, where each householder, by ordinance, was compelled to keep a bucket in his hall, as compared with the modern fire department, which is trained with but a single purpose and saves ten-fold more than it costs each year.

"There comes a time in the history of every community when it is cheaper to delegate such duties to a chosen lot of men, than to attempt to do it one's self. I believe every doctor in Ohio could afford to pay \$2.00 per year for this organization work alone. THE JOURNAL, under my plan, would be made self-supporting, by reason of the proper appreciation of the medical profession, and the commercial houses, dependent upon the medical profession for existence, would see

that THE JOURNAL was not run at a loss. To a certain extent, this is a question of the 'right of might,' but if every doctor in Ohio suggested to the house from which he bought his supplies, that a business courtesy demanded a reciprocal attention for THE JOURNAL, the question of deficit would soon be settled.

"It is perhaps asking too much of the busy doctor, that he keep in touch with all proposed legislation and that he make it his business to see the local representative of the legislature to talk with him regarding the utility of certain bills. It might be true that the man who had the time would perhaps not be forceful enough to command the respect of the man whom he was seeking to influence. Still I have always found the busiest man the most dependable in such matters. Therefore, the busier man could well afford to contribute dues to trained men who would see that in every community lectures would be given on subjects of paramount medical interest and that a proper underlying intelligent foundation would itself be a defense against such laws as have been introduced in the legislature of Ohio.

"The committee this year has been overwhelmed with work and the profession as a whole has taken but little personal interest in the situation. A small amount of attention paid to this work at the home of the legislator by the county committeemen would have been of great service in forwarding the result and relieving the state committee of much unnecessary work. Many counties did not appoint the committee on public policy and legislation, owing to unfamiliarity with their regulations, or appointed men who had been hopelessly inefficient in the past. If the plans suggested are carried out and we have more councilors or censors and better supervision, we should expect one of the good results to be an active and intelligent interest in this work, which, if neglected and vicious laws are passed, can never be overcome. The committee, in fighting the optometry bill, was actually shown a petition signed in its favor by fourteen doctors, including a high state officer. This is inexcusable and cannot but lead to destruction if persisted in.

"I think it fair to assume that all civilized countries have much the same problems to meet, and that the same conditions will cause about the same result in every county. With this in mind, it is interesting to watch the troubles the medical profession has had on the Continent, especially in Germany, due to its lack of organization; and it seems that before we can raise the physician's influence in the community, we must be thoroughly organized. The government and the manufacturers on the one side, and the laboring

men banded in clubs, on the other, have so harassed the medical man that the last two years in Germany for the ordinary practitioner, have been very hard, and especially in industrial centers. Capital there, as everywhere, is thoroughly organized and few in numbers, thus promoting co-operation; the government is bureaucratic in form; while what the laborer lacks in intelligence, he makes up in mass; and there, as in every country, there have been just enough mediocre medical men to accept the positions at a starving pittance, to justify the clubs in attempting this outrage, which the medical profession cannot adopt unless it is prepared to give up all idea of advancement. While we look upon these experiences in older countries as something to which we will not come, time has shown that many of the troubles they have had are now duplicated in our own, when we arrive at that period of sociology. We may therefore expect an increase in the contracting system of bidding for such work with the consequent lowering of the average income, whose worst feature is the inability of the contracting physician to keep himself properly prepared for the work. We can only meet this by a thorough inquiry into the facts, insuring the learned professions a standing in the community, which will forbid any attempt at this rate of compensation. It has been an insidious growth in their country and has more thoroughly established itself in this country than we ordinarily think.

"The constitution provides that the councilor shall visit every county society in his district at least once a year. This has not been lived up to, as in the opinion of some of the councilors, it is unnecessary. The experience of the past year leads me to believe that these visits are extremely important and that there should be more visits made than the minimum one named in the constitution. I think the interests of the state would be best served by either redistricting and adding more councilors, or by adopting the plan of Pennsylvania, of having censors in each county of the councilor district. The present councilor districts are not ideally arranged; some of them could not be improved upon, but others are difficult to reach because of geographical difficulties in the matter of transportation, and the result is the county society is neglected; and too often because, difficult of access, the county that needs help most, gets the least. That the councilor can visit these is proven by the fact that the first three years of the organization, visits were constantly being made; but as interest was lost, they have been neglected and some of the councilors think the county societies can run without this stimula-

tion. Experience, however, has proven this not to be true. The aim, evidently, of the founders of the plan was to have the trustees of the national and state associations govern the organization. This is shown by the long terms given councilors, and I believe the best plan for us to adopt is that the council should govern the State Medical Association and be responsible for its failures as well as its successes. The short term of the president does not allow him more than to become acquainted with the needs of the Association, when his term of office expires. The election of a president-elect, who would have a year in which to prepare, would help this somewhat, but even then an active, strong council, emulating the action of the trustees of the American Medical Association, should be the guiding force behind the organization, and while no doubt there would be some criticism of its action, its success in running the Association should be so marked and acknowledged as to be the answer to its critics, as it has been in the parent organization. And I am heartily in favor of placing greater responsibility upon the council and demanding more active endeavor and successful results. Some of the states have a shorter term for the council than we do, and do not re-elect. The council at present has this matter under consideration and has discussed it fully and is preparing recommendations regarding the faults they find in the present plan, which they will present to this body for discussion.

"One of the most valuable features adopted last year was the new by-law, authorizing a standing committee on auditing and appropriation. The practical adoption of this was heartily encouraged by the secretary and treasurer, and after considerable correspondence a committee of five was appointed, which has gone into the clerical work of the society, and for the first time in its history the secretary and treasurer have been monthly getting off a trial balance, which shows the exact status of our financial affairs. Both secretary and treasurer have aided greatly in this work, and the bookkeeping of the Association is on a par with that of the best bank in the state. Great credit is due the committee for their laborious and painstaking work, and I feel no work done during the year has the same relative importance that this has, and I should recommend the adoption of their report. And a thorough investigation into the methods used by the committee in separating THE JOURNAL and its expenses entirely from the membership fees, will I am certain, meet the hearty approval of the House of Delegates.

"It is also a pleasure to announce that there is

not a single county in the state but that has a county medical society, in full affiliation with the state society. The only county which had not been organized was successfully organized during the past year, by some very brilliant work done by the first vice president and the councilors of the county and adjoining district.

"One of the disappointments of the year has been the seeming inability of the Central Secretaries Committee to get their work in hand, especially as I consider the county secretary the most important factor in the success of the county medical society. One meeting only was held, with poor attendance, and the work has not been followed up in a satisfactory manner.

"I should also recommend that the House of Delegates appoint a committee to revise and codify the constitution and by-laws. There are some conflicting and ambiguous sentences and the book lacks an index for ready reference. The secretary has anticipated the appointment of this committee and prepared a synopsis which will greatly aid it in doing this work and reporting at this annual meeting.

"I should recommend that the House of Delegates pass a resolution, commending Senator Owen for his action in working for a Bureau of Public Health. Such recommendations should be sent him for use in the campaign he is instituting.

"One of the lamentable things in Ohio is the condition of the state institutions, especially those for the insane. As it is now, the most that can be said of these institutions is that they are houses of detention and not hospitals. We are far behind two states—New York and Iowa have most desirable systems for the treatment of these unfortunates. Our present executive has shown a disposition to recognize these faults, and should be commended for any effort to improve these institutions. The medical profession of Ohio should take it upon itself to submit a list of medical men available as medical superintendents for this work, and recommend to the legislature that same action should be taken, which will lead to an adoption of executive and medical supervision. In the two states mentioned, no one would think of returning to the old plan, as experience has shown it is actually more economical to return these people to their homes, cured, than to keep them indefinitely in such an institution. Too much attention is paid to the per capita cost of the year, rather than to the results from a medical standpoint. Experts in this department claim that the actual saving cannot be construed as applying to the per capita cost alone, and that a careful record over many years will show a

greater economy by the apparently more extravagant plan of having competent alienists treat these people with a view to an early recovery. We should begin the preparation of a plan that we might recommend to the next legislature and a skilled committee should be appointed to take this work up. We are often too hasty in judging the legislature for not accepting our views, when we are not able to express ourselves in a concrete form and have nothing tangible in hand. If a small committee should be appointed and careful work done, we should be in a position next year to hear the report and recommendations and in another year prepare a bill to be passed by the legislature, based on the most modern lines of thought.

"The organization of all the states was modeled closely after the parent organization. The American Medical Association has a president-elect. He thus has a year in which to get acquainted with his duties, to see the effect of certain methods, and it is quite certain that the trustees would be unwilling to go back to the old order of things. It has been several times suggested that our State Association follow this plan. I have always been favorably impressed with it, and the work of the last year has shown conclusively the need of such an arrangement in the election of presidents. In fact, I think it is even more necessary in the states than in the national organization. Every new president has to take at least two or three months to acquaint himself with the knowledge necessary to advance in any direction, and I think it will only need careful consideration for its adoption, when it is recalled how a president-elect in constant touch with the president, could pick up the work without the slightest lack of momentum, when he began to serve his term of office. He would be in thorough touch with the proposed aims of the organization, and would know what men had failed in the past to respond to work and what men could be relied upon in different parts of the state. We are now in the position of a supposed fast train, but compelled to stop at every station, thus failing to gather momentum. With the president-elect in touch we would never lose time, and it seems the only way to insure success. The time has arrived when the slightest cessation of effect on the part of the state officers is reflected at once in the organization and it seems to me no more thorough bond could be conceived than a president-elect being in constant touch with the acting president, and profiting by his mistakes as well as his successful work.

"Thirteen of the state associations have adopted some form of medical legal defense. In Ohio

there is one very successful local committee, composed of the members of the Toledo Academy of Medicine. Wishing the House of Delegates to have an opportunity to investigate this important feature with a view to its possible adoption in Ohio, I have asked Dr. Stone, who was instrumental in organizing the Toledo Defense Committee, to present to the House of Delegates a resumé of all that has been done in the United States. The British Medical Association was the first to start this and it has spread rapidly in the United States. Illinois reports that it has added two thousand members to its list, and I am confident that its adoption in Ohio would be a step in advance. This works no injustice to the public and protects the scientific man from what is practically always a species of blackmail. I ask for a most earnest inquiry into the virtues of this plan.

"The criticism can be made of this address that it does not deal sufficiently with the scientific aspect of medicine, but I feel that the ideal physician is a well-rounded one and that much of the false pretense in our profession is caused by the grinding need for finances sufficient to run a well-balanced life. Without this a scientific education is impossible. Books and post-graduate work are dependent upon a fair amount of practical success. And he will work best whose life is broad in all proportions. We have made greater advancement relatively on the scientific side of our lives than on the sociological. The very feature which has assured scientific work of a high character is the degree of individualism that our work peculiarly develops. Isolation from our colleagues during the hours of work and dependence upon one's own judgment raise this quality to a higher power than is compatible with co-operation. I have changed my ideas in the last few years regarding the greatest need to the physician, and the means of procuring it. It seems to me useless to expect a high degree of scientific intelligence and the necessary equipment for its work from a man who lacks the ordinary advantages he sees about him. It is a fact that the classes who have the least individualism are the most easily organized. And in this civilization, organization is absolutely necessary to obtain results. It is the lack of this which I deplore in medical life.

"In the present state of things in this country the professional type generally is ground to pieces between the upper and nether mill-stone of capital and labor. These two forces are combined against this great middle class which makes up the independent thinkers of the community and it is the voice of the independent thinker that

he will not take a part in collective and co-operative movements; and the result is that both his individual and social duties are sacrificed to his spirit of independence. Capital and labor represent nothing but an economic materialism and the professional classes which stand for something better, sacrifice this on the altar of their independence, and will never achieve what it is their duty or policy to achieve, until they show the same combining power and readiness to yield their individualism to a larger social utility."

The president then introduced Willard J. Stone, M. D., of Toledo, who delivered the following special address:

THE PRINCIPLES OF MEDICAL DEFENSE AS APPLIED
TO THE OHIO STATE MEDICAL ASSOCIATION.

Organizations for medical defense in local and state medical associations have been steadily growing in influence during the past decade. The first organization of this kind originated in the British Medical Society in 1885 and proved to be a success from the beginning. Since then (to January 1, 1910) the following thirteen states have put into operation some form of medical defense for members of their various associations: New York, 1906; Illinois, 1906; Pennsylvania, 1905; Maryland, 1905; Iowa, 1907; Wisconsin, 1902; Kentucky, 1908; Massachusetts, 1908; Nebraska, 1908; Minnesota, 1909; New Jersey, 1909; Michigan, 1910; Missouri, 1908. The medical defense plan as carried out in all instances, has been found to bring together the members in closer organization, to greatly increase membership, and to decrease the number of mal-practice suits against physicians by at least 25 per cent. Progress along this line of work has not been rapid but the prophecy may be ventured that ultimately all state societies will consider it as necessary to display altruistic tendencies at home for the protection of the integrity and reputation of their members, as they have in the past been ardent altruists and supporters of progress along other lines.

Self-protection has been from the beginning of time, the first law of preservation, and should be a feature common to all organizations.

Physicians have apparently always, from time immemorial been subject to malpractice suits. These suits have their origin as a rule in misunderstanding or upon statement of alleged misconduct. Many times such charges of malpractice are made by persons for the purpose of blackmail or gain, or in the attempt to evade the payment of a just bill. A physician's most valuable asset is his reputation, and it is this asset that individuals, abetted by the ever present unscrupulous lawyer, seek to assail.

The various state associations which have adopted the medical defense plan have largely benefited from the experience of local organizations: i. e., the so-called New York plan had its origin (1906) in the plan adopted by the Medical Society of the County of New York in 1901; the Illinois plan (1906) is an amplified adoption of the plan inaugurated by the Chicago Medical Society in 1902; the work at present being carried on in Missouri State Society is founded upon a plan adopted by the St. Louis Society in 1907, while the Michigan plan of defense (1910) took its origin from the work inaugurated by the Wayne County Society in 1905.

The plan of defense as adopted by the states named above differs somewhat as to detail but not in general principle. In general, the following essentials have been more or less closely followed by all the states: The organization of a committee, known as the Medico-Legal Committee, or as the Medical Defense Committee, whose duty was to take charge of all suits filed against members of the state society.

This committee was composed of the council in the State of Pennsylvania with full power to conduct the defense through its attorney, the various facts having been passed upon by the censors of the county society in which the alleged cause of action arose; in Maryland, the council employs an attorney and has full charge of the medical defense plan; in New York and Massachusetts, the work is carried on through the office of the secretary of the state society and its attorney; in Iowa, the work is in charge of a committee of three, perpetuated by the election by the House of Delegates of one member each year; in Wisconsin, the committee on medical defense consists of the president, secretary, and treasurer of the society with the twelve councilors, who shall select from their number, or from the society at large, an executive committee of three to be perpetuated by the election of one member each year; in Kentucky, the plan is different from that in any other state, the work being in charge of a subsidiary protective organization known as the Medical Defense Branch of the State Association, whose executive officers are the president, secretary and treasurer of the state society with five other members. In Nebraska, the Medico-Legal Defense Committee consists of the secretary of the State Association and two other members elected by the House of Delegates; in Michigan, the Medico-Legal Committee consists of an executive board of five to be elected by the Council, and one member from each component County Society, not otherwise represented, to be elected by such

societies; while in Illinois, the medical defense committee consists of one member from each county society in the state, except Cook county, and three members from Cook county representing the Chicago Medical Society.

Each of the plans embodies the following features: The employment of an attorney skilled in medico-legal work and known as the attorney of the state society, who conducts with the aid of the Medico-Legal Committee the defense of all suits, the expense of the attorney (annual retainer fee based upon membership of the society) and other expenses to be met by: 1—The treasury funds of the society in Nebraska, Pennsylvania, Massachusetts, New York and Missouri, while in Maryland the fund is available only for those members who pay the dues of the state society in advance; that is, prior to March 1st; or, 2—By an increase of the per capita dues or by special assessment. In Illinois when the plan of medical defense was inaugurated, the sum of one dollar was added for this purpose to the state per capita assessment of one dollar and fifty cents, making the total amount of the state assessment two dollars and fifty cents. In Wisconsin and Iowa, each member of the state society was assessed one dollar per year for the purpose, while the subsidiary branch organization of the State Association of Kentucky charges an initiation fee of five dollars with yearly dues of one dollar, and Michigan charges one dollar and fifty cents the first year for all new members and one dollar per year thereafter.

The New York experience has shown that the yearly expense averages fifty cents per member per year. In all probability it is safer to fix the yearly dues at one dollar for the first two or three years, after which time, when the accumulated fund allows a safe margin for future contingencies, the yearly dues may be decreased. The important conclusions to be reached from the experience of the past five years in a study of the medical defense feature of state society work may be summarized as follows:

1. Since most so-called malpractice suits against the physicians arise from misunderstanding or for purpose of extortion, a stiff defense by a firm of attorneys experienced in such work, is usually all that is necessary to lessen the ardor of any adventurer or unscrupulous lawyer. Physicians who are members of such an organization are more careful in opinions expressed regarding the work of their associates. The medical defense feature deals only with civil actions brought against members of the state society. No attempt is made in such an organization to excuse negligence or culpability on the

part of members; since if physicians are careless in their methods, dilatory in their diagnoses, or culpable in other ways, they are advised to settle the matter in hand, as seems most advisable to the executive committee and the attorneys employed by such committees. It is not the purpose of such an organization to pay damages. A certain stipulated sum is paid the attorneys for time spent in court; otherwise all preparation of threatened suits up to actual trial, is covered by the annual retainer fee.

2. It has been found from the financial point of view, that such a plan has proven successful in all the states which have so far tried it. It furnishes to all members a cheap form of insurance, but not for profit, since the annual dues may be decreased as soon as sufficient funds have accumulated in excess of requirements. Such a feature also greatly increases the membership of the state society. In Illinois the secretary of the state society has recently informed me that this feature has increased their membership over two thousand within the last two or three years.

3. The number of malpractice suits against physicians has been decreased by at least 25 per cent in the states which have adopted the medical defense feature.

On motion of Dr. J. E. Monger, seconded by Dr. A. J. McNamara, two committees of three each were appointed to report at a later meeting on these two addresses to the House of Delegates.

Committee on president's address: A. J. McNamara, J. E. Tuckerman, Chas. Moots.

Committee on W. J. Stone's address; J. E. Monger, W. J. Stone, Wells Teachnor.

The general meeting thereupon adjourned.

The House of Delegates was called to order by the president. The secretary called the roll, and the following delegates* and councilors responded:

LIST OF DELEGATES.

Adams, O. T. Sproull; Allen, S. B. Heiner; Ashland, J. A. Ligenfelter; Ashtabula, O. A. Dickson; Athens, —; Auglaize, —.

Belmont, —; Brown, —; Butler, —; Carroll, —; Champaign, D. C. Houser; Clark, F. P. Anzinger; Clermont, —; Clinton, —; Columbiana, W. E. Morris; Coshocton, C. A. Portz; Crawford, C. D. Morgan; Cuyahoga, J. E. Tuckerman, C. B. Parker, W. E. Bruner, A. H. Bell, W. I. Lefevre.

Darke, J. E. Monger; Defiance, W. J. Walter; Delaware, —.

Erie, C. Graefe.

Fairfield, —; Fayette, —; Franklin, P.

*In counties in which neither the delegate nor alternate was present a member of the County Society, if present, was recognized as delegate.

D. Shriner, W. C. Davis, V. A. Dodd, Wells Teachnor; Fulton, —.

Gallia, J. Aiken; Geauga, —; Green, F. W. Ogan; Guernsey, J. B. Headley.

Hamilton, J. E. Thompson, W. D. Hanes, C. L. Bonifield, M. Heidingsfeld, M. A. Tate, E. J. Keho; Hancock, J. C. Tritch; Hardin, W. A. Belt; Harrison, —; Highland, J. D. Gibson; Henry, —; Holmes, —; Hocking, —; Huron, D. W. Rumbaugh.

Jackson, W. H. Parker; Jefferson, W. E. Kerr. Knox, R. W. Colville.

Lake, —; Lawrence, H. S. Reger; Licking, E. J. Barnes; Logan, T. P. Kaylor; Lucas, W. W. Brand, S. D. Foster, Chas. W. Moots; Lorain, A. J. McNamara.

Madison, —; Mahoning, H. E. Welch; Marion, Carl Cawyer; Medina, —; Mercer, —; Meigs, —; Miami, W. J. Kelley; Monroe, —; Montgomery, H. C. Haning, S. M. Huston; Morrow, —; Muskingum, W. A. Melick; Morgan, —.

Noble, J. G. Albers.

Ottawa, H. J. Pool.

Paulding, J. W. Cartwright; Perry, —; Pickaway, Geo. R. Gardner; Portage, —; Pike, E. M. Dickson; Preble, —; Putnam, J. F. Sheibley.

Richland, —; Ross, B. A. Perrin.

Sandusky, S. W. Philo; Scioto, S. B. McKerrihan; Seneca, —; Shelby, J. E. Costello, D. R. Silver; Starke, V. I. Adair; Summit, J. H. Seiler.

Trumbull, D. E. Hoover; Tuscarawas, E. A. Wolfe.

Union, —.

Vinton, W. H. Henry; Van Wert, —.

Warren, S. J. Ellison; Washington, — Wayne, —; Williams, G. W. Smeltz; Wood, —; Wyandot, —.

On motion of A. J. McNamara, duly supported, the reading of the minutes of the preceding year was dispensed with, inasmuch as they had been published in THE JOURNAL.

The secretary read the following proposed amendment to the by-laws:

Resolved, That Section 1, Chapter 10, of the by-laws be amended as follows: In the first line strike out "one dollar," and insert "one dollar and fifty cents."

This having lain over for one year, according to law, was now brought up for action.

Dr. T. Clark Miller: I think it important that this matter be considered. The funds being insufficient has made necessary a fifty cents per capita levy, which has helped us into better condition; and yet, as the president explains, THE JOURNAL is a burden to us in the sense that we are not able to do as much as we would like toward maintaining it by advertising. We have strong competition. You all know of the advertising of the large publishing houses in Phila-

delphia which advertise largely in the Journal of the American Medical Association and are a great source of income. We cannot get them, of course, but the same is true of other publishing houses; so that our advertising field is limited. THE JOURNAL could be made self-sustaining if we could use advertisements that we do not want.

There is but one state in the United States with so low a membership fee as ours. If I am not mistaken, two dollars is the lowest membership fee of any in the United States, except the one which does not publish a journal. I think our Journal, while not everything we would like to have it, is important to us, and I think this amendment enabling us to get a little more income is very reasonable. I think the dues ought to be higher than that. There must be considerable expense in running the machinery of such a large society, and we could well run it with the amount we have, if it were not for the necessity of running THE JOURNAL, but it would be a great mistake to do away with that. If this is adopted one dollar and fifty cents becomes our annual dues after this meeting.

On motion of A. J. McNamara, duly supported, the amendment was adopted.

On motion of F. D. Bain, duly supported, the following telegram was ordered to be sent to the Governor of Ohio:

To His Excellency, Hon. Judson B. Harmon, Governor of Ohio:

The following resolution was unanimously adopted by the House of Delegates of the Ohio State Medical Association, representing 4000 practising physicians:

"We most respectfully petition your honor to veto the optometry bill because it is in direct conflict with the medical practice act, opposed to public policy, distinctly class legislation, and a positive menace to the public health."

W. H. SNYDER, President,
J. H. J. UPHAM, Secretary.

On motion of Chas. Moots, duly supported, the following was adopted:

Resolved, That we deprecate the use of benzoate of soda and similar chemical preservatives in the preparation of foodstuffs intended for human consumption, and that we urge upon congress such modification of the pure food act as will make their use impossible.

The following nominating committee was announced: First district, M. A. Tait; Second, H. C. Haning; Third, Carl N. Sawyer; Fourth, W. W. Brand; Fifth, A. J. McNamara; Sixth, J. F. Kaylor; Seventh, E. A. Wolf; Eighth, E. J. Barnes; Ninth, J. Aiken; Tenth, P. D. Shriner.

The treasurer, James A. Duncan, read his

annual report, and there being no objection, same was accepted and placed on file.

(This is published in Report of Auditing Committee.)

J. H. J. Upham read report of the secretary, and there being no objection, same was accepted and placed on file.

SECRETARY'S REPORT.

May 11, 1910.

The annual meeting held in Cincinnati, May, 1909, was the largest and most successful in the history of the Association, over 800 being registered, and it is estimated that fully 1000 were in attendance.

The minutes of the House of Delegates have already been presented to you. The scientific program was of exceptional excellence. All of the sections were well attended and carried out successfully as the program was printed.

The new section on nervous and mental diseases made a very auspicious beginning, holding two well attended sessions, with excellent papers and quite generally discussed.

There were nine special addresses, six made before sections and three before the general meeting.

Since the meeting the Association has manifested a general healthy activity. The total membership reached 3801. It is a pleasure to report all countries organized and all but two in good standing.

In accordance with the call for delegates to the Pharmacopeial Convention the following were appointed to represent this Association; Torald Sollman of Cleveland, Julius Eichberg of Cincinnati, and Frank Winders, of Columbus.

In response to a request to call for a delegate to the Association of Medical Colleges, W. J. Means of Columbus was appointed.

In accordance with the request for contribution for the widow of Dr. James Carroll the sum of \$112 was collected at the banquet and sent to the committee in Washington, D. C.

Respectfully submitted,

J. H. J. Upham,

Secretary

J. W. Clemmer read report of the committee on public policy and legislation.

TO THE HOUSE OF DELEGATES: The committee on public policy and legislation begs leave to submit a report.

The following bills of interest to the medical profession were enacted by the Seventy-eighth

General Assembly. A few of these, however, are still subject to the veto power:

1. A bill creating the office of state inspector of plumbing, under the state board of health.

2. Sections of the statutes relative to the sale of cocaine and like substances were amended.

3. A bill permitting county infirmary directors to afford outside relief to persons unable to be moved or having infectious diseases.

4. A bill requiring contractor owning construction camp to pay expenses for the treatment of contagious diseases.

5. S. B. No. 51, creating a state board to regulate the practice of optometry. This bill is now in the hands of the Governor, awaiting his signature to become a law. It is suggested that the different sections and House of Delegates request the Governor to veto this measure.

6. Permitting county commissioners to assist private charitable hospitals.

7. Two bills regulating the branding and sale of cheese.

8. A bill providing a sliding scale of fees for local registrars from 10 to 25 cents.

9. Giving cities authority to license manicures, masseurs and chiropodists. This provision is an amendment to Section 3670 of the General Code, regulating pawn brokers, peddlers, etc.

10. "The Criminal Abortion Bill," granting immunity to subjects of malpractice.

11. A bill directing the inspector of work shops and factories, fire marshal and state board of health to draft a building code for public and other buildings.

12. A measure providing for the election of six trustees for county hospitals.

13. Providing for elementary schools by city school boards for the education of children afflicted with tuberculosis.

14. Providing public instruction in dairying by officials of the State Food Department.

15. Allowing medical witnesses before the probate court in lunacy cases \$3 a day and mileage.

16. Providing for inspection of maternity boarding houses when application for license has been refused.

17. Anti-cigarette bill, making it a misdemeanor to sell tobacco to children under eighteen.

18. Authorizing council to improve river and water course and charge cost against abutting property.

The following bills were introduced but failed to pass:

1. S. B. No. 61, To authorize the State Board of Health to establish a bureau of infectious and

contagious diseases and to appoint necessary district medical inspectors.

2. H. B. No. 408, Providing for medical inspection of public school children.

3. H. B. No. 385, To regulate the itinerant vending of medicines, nostrums and appliances for the treatment of diseases, injury or deformity.

4. The medical advertising bill.

5. The Christian Science bill.

6. Providing disinfection of a house and contents in which a person has had tuberculosis.

7. The measure providing sterilization for certain defective classes by vasectomy.

The Codifying Commission eliminated from the statutes of 1902, creating local boards of health, that provision by subsequent amendment granting power to city councils to abolish such boards by placing the administration of the public health in the hands of service boards. The Paine law warranted this action of the commission and removed the political stain placed upon the original statute providing for health boards on the merit system.

It was manifested early in the session that important bills advocated by the medical profession would be opposed by the organized efforts of the Christian Scientists, drugless healers and proprietary manufacturers.

Circular letters and electrotyped statements in the leading newspapers of the state attacking important measures were freely distributed. Editorial writers, and even some medical journals, unwittingly took up the fight against these bills with the effect to kill them in committee.

When it is possible for the enemies of the medical profession, through misrepresentation and destructive motives, to entrap the newspapers into opposition against the medical inspection of the public schools and other public health measures, it shows a lack of organization work in a campaign of education on the part of medical men. The means employed were effectual in placing all medical legislation in more or less disfavor.

The ban placed upon all promoters of legislation by corrupt lobby under charges of bribery made the work of your committee an unenviable task. Experience teaches year after year that the representative capacity of the State Association before the Legislature should be dignified by the assistance and co-operation in larger measures from members of component societies. Members of your committee at times feel humiliated before General Assembly committees when confronted with the painful evidence of disorganization as exemplified in optometry legislation.

In the House the optometry bill was referred to the Committee of Medical Jurisprudence, composed of seven members, four of whom are physicians. Excepting Dr. L. M. McFadden, chairman, all the physicians voted to place this bill on the calendar and voted for the bill on its passage.

A petition for the bill, exhibited in committee, containing twenty signatures enrolled fourteen physicians with one councilor.

The lack of team work all around among physicians, as pitted against the organized efforts of the opticians in a campaign running through three sessions of the Legislature resulted in the passage of the bill by both houses.

The Christian Scientists introduced a bill late in the session. The bill was strongly opposed and well defended in a public hearing, but was voted out of committee and placed on the calendar. The healers have secured recognition in other states. Ohio assemblymen will be appealed to for the "God-given right to exercise conscience and the privilege to pray"—at two dollars per prayer.

The drugless healers are planning to secure a state board. A further invasion upon state medicine by medical cults will practically repeal the medical practice act.

Year after year we have pointed out these dangers and asked for greater activities and co-operation in defense of medical standards. Present indications correspond to the warnings of two years ago when your attention was called to the hazardous status of the present restrictive principle of medical practice, with a tendency toward the definitive plan in which the camp followers will be permitted to practice without qualification.

Your committee reiterates the defensive attitude necessary to be taken and sustained by the individual members of the Association against the yearly invasion of cults and classes who are constantly seeking recognition of the state and the favor of practicing medicine in some of its branches without proper qualification.

To professionalize medical cults means the repeal of the medical practice act and lowered standards of state medicine.

State Committee:

J. W. CLEMMER,
GEO. H. MATSON,
J. H. J. UPHAM,
C. O. PROBST,
W. H. SNYDER.

On motion of Dr. Thompson, duly supported, a vote of thanks was extended to the committee for its arduous work.

The report of the committee on publication follows:

REPORT OF PUBLICATION COMMITTEE FOR 1909.

The fifth volume of *THE JOURNAL* was published throughout the year 1909. This volume contained 728 pages of reading matter made up approximately as follows:

Original articles 370, editorials 32, editorial notes 32, correspondence 4, State Board news 13, medical economics 23, program and transactions 39, current medical literature 35, county society news 129, book reviews 25, news notes etc., 21, clinical notes etc., 5.

This year *THE JOURNAL* has been able up to the current number to bring out practically all of the original articles presented at the last annual meeting with the exception of a few which were not typewritten according to the rules, and therefore unavailable.

MATERIAL.

There has been no change in the material or makeup of *THE JOURNAL* with the exception of printing the date and number of each issue on the back of the cover, and toward the end of the year, the printing of the date of the issue at the top of each page for the convenience of readers.

It has been deemed advisable by your committee to continue the use of the high-grade paper for the better reproduction of cuts and engravings, and for the general appearance of *THE JOURNAL* as a whole.

ORIGINAL ARTICLES.

Volume V contains seventy-eight original articles, all but one of which were presented at the annual meetings of the State Association.

While the average merit of these articles has been excellent, your committee feels that the standard of *THE JOURNAL* would be elevated, and our official organ would receive greater recognition over the country, if each section would appoint a committee empowered to censor the papers, indicate those to be published in full, and those which might be condensed or abstracted. At present the large number of papers presented necessitates, for lack of space, the refusing of many excellent papers sent to *THE JOURNAL* for publication. It is with regret that this has been necessary, but it has been imperative to give first choice to the papers read before the State Association. Your committee feels that much valuable material could be presented to our members if some method of condensing or abstracting as above mentioned could be inaugurated.

EDITORIALS.

In the editorial department your committee

has sought as heretofore to treat of questions of the day of general interest in connection with organization work, legislative questions, scientific subjects and medical matters of all sorts. In all, thirty-four editorials have appeared, covering a wide range of subjects.

CORRESPONDENCE.

Your committee reiterates its regret that greater use of this department is not made by members of our Association. It feels that it would be of value to the members at large to discuss informally various matters of interest along organization or medical lines.

CURRENT MEDICAL LITERATURE.

This department has continued under the efficient management of Dr. J. E. Tuckerman of Cleveland, whose prompt and efficient services are commended to your favorable attention. Thirty-five pages of abstracted material have appeared in Volume V, carefully selected for its practical value.

BOOK REVIEWS.

Sixty-three books of interest to the medical profession were reviewed in this department. In all of these an endeavor was made to give an impartial view of the works in hand for guidance of members.

SOCIETY NEWS.

In this department 129 pages have been filled with news of society meetings, abstracts of papers, etc. The amount of reported material in these columns is gratifying, and your committee would commend the valuable services of some of the collaborators, especially of L. A. Levison, of the Fourth District; Fred Fletcher, of the Tenth District; C. E. Ford, of the Fifth District. We regret very much that pressure of professional work has compelled L. A. Levison to resign as collaborator, but are glad to report that he has consented to assist J. E. Tuckerman in the department of current medical literature.

County secretaries are co-operating fairly well, but much more could be done by them. We would recommend that each delegate impress upon his county society the value of sending abstracts of papers presented at their meetings to *THE JOURNAL*. It would be best if each essayist would furnish to the secretary such an abstract of his paper as would include the main points from his own viewpoints, and the secretary should then promptly forward them to *THE JOURNAL* for publication.

THE JOURNAL goes to press about the 20th of each month, hence material should be mailed before this date to insure its prompt appearance.

MEDICAL ECONOMICS.

In this department twenty-three pages of ma-

terial have appeared under the management of J. W. Clemmer. Articles on organization work, legislative, economic and ethical questions have appeared in each number of THE JOURNAL.

NEWS NOTES.

The practice of publishing news notes of interest has been continued and some twenty-five pages have been published. Your committee would solicit the co-operation of the members in reporting to the editor any item which would be appropriate for this department.

Clinical notes, foreign letters and abstracts of the proceedings of other societies have appeared from time to time, in the hope of adding material of interest to the members.

ADVERTISEMENTS.

The continued policy of restricting the advertisements to high standards renders the securing of advertising matter more and more arduous, and unless some such plan of co-operation as suggested in the president's address be inaugurated, the Association must expect to shoulder the greater part of the burden of publishing THE JOURNAL.

It is respectfully urged that this matter receive the serious attention of the House of Delegates.

FINANCIAL STATEMENT.

The cost of THE JOURNAL has not increased over the past years and has even been slightly reduced. The following financial statement was submitted to the auditing committee, January 1, 1910:

LOSS AND GAIN STATEMENT FROM JANUARY, 1909, TO JANUARY, 1910.

Revenues—

Advertising	\$3,434.74
Subscriptions	14.75

Total revenues 3,449.48

Expenses.

Commissions	321.59
Editor's salary	1,100.00
Editor's assistant's salary....	647.85
Journal printing	3,780.53
Journal postage	215.62
Cash discounts	9.94
Misc. expense	145.83
Misc. postage	15.72
Stationery and printing	78.35
Traveling expenses	30.00

Total expenses 6,345.43

Net loss for period..... \$2,895.95

In this amount are included salaries owing for year before (1908), \$100, and the salary of secretary, \$125, making a net expense to the Association of \$2670.95. In this year also the salaries of all the reporters of the various sections,

amounting to \$257.95, have been charged to THE JOURNAL and included in the above account.

Hoping that THE JOURNAL continues to merit your approval, and requesting the benefit of your suggestions and criticisms, this report is respectfully submitted.

(Signed) J. H. J. UPHAM,
T. W. RANKIN,
JOHN E. BROWN,
FRANK WINDERS.

Ben R. McClellan read report of the national legislative committee.

Mr. President and Members of the House of Delegates: As your representative on the National Legislative Council of the A. M. A., I beg leave to report as follows:

Our annual meeting this year was a joint conference of the Council on Medical Education, and the Committee on Medical Legislation, held in Chicago, February 28-March 2, 1910. There were 183 present at this meeting, representing thirty-seven states and two Canadian provinces. Ohio was represented by eleven.

Much of the work of this conference was in the interest of a model medical practice law. There were reports from standing committees on the following questions touching this law, to-wit: On Definition of the Practice of Medicine; on Reciprocity and Registration; on Revocation of License, and Penalties; on State Licensing Examinations.

Along the same line were addresses on the following subjects: "The Constitutional Aspects of Medical Licensure," by Prof. Freund; "The Value of Uniform State Laws Regulating the Practice of Medicine," by Prof. Pound; "The Importance to the Public of the Proper Enforcement of Medical License Laws," by Judge Olsen, of the Chicago municipal court; "The Attitude of the Medical Profession Regarding Medical Practice Laws," by Dr. Henry B. Favill, of Chicago.

These reports and addresses were listened to with great interest, and most of them were followed by spirited discussions. It is expected, as a result of this conference upon these important subjects, that a model medical practice act will be issued in due time, by the Bureau of Medical Legislation.

The Council was very much edified by addresses by the Hon. Ellsworth Brown, U. S. commissioner of education, Washington, D. C.; by Henry S. Pritchett, president of the Carnegie Foundation for the Advancement of Teaching, New York City; by Jacob Gould Schurman, president of Cornell University, and by Dr. Vic-

tor C. Vaughan, dean of the University of Michigan College of Medicine; on various phases of the subject of medical education. These addresses were ably discussed by George E. McLean, president of the University of Iowa; by Dr. Cyrus Northrop, president of the University of Minnesota, and others.

Dr. Bevan, chairman of the Council of Medical Education, most earnestly emphasized the duty of the medical profession educating the public to the great possibilities of modern medicine. "When this has been accomplished, public opinion will not only demand the creation of efficient boards of health, but will provide the necessary endowment for medical schools that will provide a thorough training of practitioners in the practice of medicine."

Secretary Colwell, in his report, insists that the time has come when the medical profession, and the people of each state, should see to it that a single board of competent medical examiners shall control the licensing of all practitioners of medicine.

Dr. C. A. L. Reed, in his chairman's address, again emphasized the importance of formulating acceptable legislation, looking to the improvement of our national health service.

Dr. Frederick R. Green, in his secretary's report, gave a brief summary of advanced legislative work throughout the different states.

The various standing committees on national legislation reported at length, each of which reports were discussed and referred to the Committee on Conclusions and Plans of Action, which committee reported favorably on the suggestions of the different committees.

Following the conference, the Bureau of Medical Legislation sent out to the members of the Auxiliary Legislative Committee throughout all the societies of every state in the Union, a letter, calling attention to and endorsing the bill introduced by Senator Robert L. Owen, providing for the reorganization of all existing national health agencies, with enlarged functions, into a single department of the government, to be known as "The Department of Health," in charge of the secretary of health. This circular letter urged upon each recipient the necessity of at once writing to his U. S. senators and congressmen, setting forth his own views as well as those dominant in his community, upon the subject of public health legislation, and especially urged the importance of securing favorable endorsement of the leading editors and politicians in his county and district. This letter also called attention to the advantage there would be in arranging for popular meetings in the interests

of this bill, at which resolutions should be passed fully endorsing it. Copies of these resolutions, properly signed, should then be sent to the respective U. S. senators and congressmen.

It is gratifying to be able to report that this appeal was not made in vain, but was responded to by a large per cent of the auxiliary committeemen throughout our state. I take this opportunity to thank and commend these committeemen for their interest and zeal in this matter.

This leads me to remark that three years' experience in this legislative work has fully convinced me of its far-reaching importance; also of the fact that our profession is beginning to awaken to the great opportunity that is awaiting the time when a thoroughly *aroused* and *united* profession shall occupy its rightful place in the leadership of the people in all matters that conserve their health as well as wealth. To this end, may I offer the suggestion that each component society should adopt a practical policy of carefully selecting their legislative committeeman, with a keen regard to his fitness for such service, and also that they set apart at least one meeting in each year to be devoted entirely to the consideration of politico-legislative matters.

In conclusion, may I urge upon this House of Delegates that they comply with the request of the House of Delegates of the A. M. A., and in the future choose for the important office of national legislative councilor the same person who is to serve as chairman of the state legislative committee.

With profound gratitude for the honors and favors of past years,

Respectfully submitted,

BEN R. McCLELLAN.

On motion of A. J. McNamara, duly supported, a vote of thanks was extended to Dr. McClellan for his excellent work.

Jno. G. Keller, chairman, read the report of the auditing committee.

REPORT OF THE COMMITTEE ON AUDITING AND APPROPRIATION.

To the House of Delegates:

Gentlemen—A meeting of the Committee on Auditing and Appropriation of the Ohio State Medical Association was held July 15, 1909. This committee was created by the amendment to the by-laws introduced by H. C. Hanling, of Montgomery county, and passed by the House of Delegates at the Cincinnati meeting. The amendment adds Section 4 to Chapter 10 of the by-laws, which reads as follows:

"There shall be a standing committee on auditing and appropriation, whose duty it shall be to

audit the accounts of the treasurer and to apportion the estimated income for the coming year to the several features of estimated necessary expenditures. Any surplus or balance in any fund at the end of the year shall go into the general fund for reapportionment. Money not specially appropriated, shall be known as the contingent fund and may be drawn upon for unforeseen emergencies on an order from the council, approved by the president and the secretary of the Association."

The aim of the committee has been to reduce expenditures, yet to avoid limiting the efficiency of the Association, and to this end their action has been taken. The method of business accounting suitable in former days was found entirely unsuited to the present business of the Association. By separating THE JOURNAL business from the general financial business of the Association it was possible to lighten the duties of both the secretary and the treasurer, and to save in the expense for salaries, commissions, etc. Whenever the provisions made by the committee contravened the constitution and by-laws, it was made necessary to initiate a business-like system suited to present needs and future growth, and was with the consent and approval of the president, secretary, treasurer and councilors of the Association then present.

The committee in order to separate the general business of the Association from its JOURNAL business (and in order that the books might more clearly show the exact nature of every transaction), decided to recommend two sets of books and the following arrangement:

The treasurer shall act as financial secretary, and shall demand, collect, and receive, all funds due the Association from every source whatever (except accounts due THE JOURNAL in the conduct of its business). He shall deposit the funds in a bank of deposit in the name of "The Ohio State Medical Association." He shall keep a complete set of books concerning the financial business (except that of THE JOURNAL) of the Association.

The recording secretary shall act as managing editor of THE JOURNAL; he shall conduct its business, employ a secretary, bookkeeper, and such other aid as he requires; shall keep a complete set of books covering the business of THE JOURNAL and shall render a monthly trial balance of its accounts to the chairman of the Auditing and Appropriation Committee. He shall pay over the profits of THE JOURNAL to the treasurer at the end of each fiscal year (or whenever ordered to do so by the Auditing and Appropriation Committee or House of Delegates). Whenever the

income of THE JOURNAL does not meet its expense, he shall make requisition on the treasurer for the necessary amount.

The books of the treasurer and those of the managing editor shall be opened to date from January 1, 1909. THE JOURNAL business shall appear on the books of the managing editor at an appraisal of one thousand (\$1000) dollars. The managing editor's salary shall be one thousand (\$1000) dollars per annum, the treasurer's two hundred and fifty (\$250) dollars per annum, to date from January 1, 1909. The secretary of each county society shall transact all financial business directly with the financial secretary of the State Association.

This plan has been in operation since January 1, 1909, and has greatly facilitated the conduct of the business of the Association. The following is the audit of the books for the year January 1 to December 31, 1909:

TREASURER'S REPORT.

Balance Sheet as of December 31, 1909.

ASSETS	
Cash in bank.....	\$1,236 91
Accounts receivable—customers	232 50
J. H. J. Upham, editor.....	2,760 13
Total assets	\$4,229 54
LIABILITIES	
Dues prepaid by counties.....	\$ 10 00
Jas. A. Duncan.....	1 00
Public Policy and Legislation..	66 88
Total liabilities	77 88
Excess of assets over liabilities	\$4,151 66
Represented by—	
Gain Jan. 1, 1909, to Dec. 31, 1909	\$4,058 21
Add surplus prior period....	93 45
	\$4,151 66
REVENUES AND EXPENSES	
From January 1, 1909, to January 1, 1910.	
Revenues—	
Dues	\$3,812 00
Special assessments	1,559 50
	\$5,371 50
Expenses—	
Councilors	\$ 429 53
Miscellaneous expense	65 70
Postage	55 36
Salary of treasurer's assistant	15 00
Salary of treasurer.....	307 00
Salary of secretary's assistant	120 00
Stationery, printing and supplies	102 75
Traveling expense	177 95
Annual stenographers	40 00
	1,313 29
Net gain for period.....	\$4,058 21

EDITOR'S REPORT.

Balance Sheet as of December 31, 1909.

ASSETS

Accounts receivable—customers	\$1,180 28
Furniture and fixtures.....	100 00

\$1,280 28

LIABILITIES

James A. Duncan	\$3,369 83
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Excess of liabilities over assets	\$2,089 55
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Represented by—

Loss—Jan. 1, 1909, to Dec.

31, 1909

Deduct surplus prior period

Net impairment, Jan. 1, 1910

LOSS AND GAIN STATEMENT.

From Jan. 1, 1909, to Jan. 1, 1910.

Revenues—

Advertising

Subscriptions

Total revenues	\$3,449 48
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Expenses—

Commissions

Editor's salary

Editor's assistant's salary....

Journal printing

Journal postage

Cash discounts

Miscellaneous expense

Miscellaneous postage

Stationery and printing....

Traveling expenses

Total expenses

Net loss for period.....

On the basis of this report your committee recommends that in order to meet the present needs of the Associations, the dues should be not less than \$1.50 per member per annum.

To facilitate the work of the audit, it is also suggested that the councilors and the legislative committee send in itemized accounts of their expenses. Blank vouchers could be furnished for this purpose.

Respectfully submitted,

(Signed) J. G. Keller, Chairman,
Mark D. Stevenson, J. E. Tuckerman,
J. A. Thompson, W. J. Means.

Wells Teachner moved that the report be adopted; that the business of the Association be conducted according to the recommendations made; that the by-laws be amended to conform to them; that the present auditing committee be reduced to three and the present committee be referred to the nominating committee for re-

election. The motion, duly supported, was carried.

D. R. Silver read the following report of the committee on vasectomy.

REPORT OF THE COMMITTEE ON VASECTOMY.

Your committee desires to report that a bill providing for the sterilization of habitual criminals was prepared by Representative Gusweiler, of Cincinnati. The provisions of this bill, as amended by Senator West, met with the approval of the committee, and it was thought best to leave it in the hands of the author, to be managed according to his best judgment. In accordance with the routine method the bill was referred to a committee and it was there decently buried, that is, it was not reported out.

What its fate would have been if it had been fathered and championed by your committee or by others of the medical fraternity who are interested in the measure, is difficult to foretell. It is probable that its fate would have been the same. The fact is that the laity is but little less thoroughly informed on the need of such legislation than is the medical profession itself. The idea of human sterilization is repugnant to the average man, and unless he studies the subject carefully, and also learns what has been done, he will turn from any such proposal in disdain. He has little patience with the cranks who would mutilate sexually, even the habitual criminal.

It is easy to jump at conclusions, but to render just judgment, free from bias and prejudice, requires careful and patient examination. It is the judgment of your committee that the subject of parenthood and race culture, the so-called science of eugenics, should receive vastly more attention than is accorded to it in the reading and study of the average physician, to say nothing of the average layman.

It can be laid down as an axiom that there can be no interference with child life after the union of the cells concerned in reproduction. Once the child has come into being its life is sacred, and all we can do without an infraction of the moral law is to provide for its environment and its education.

The only means we have to redress the imbalance which threatens to engulf us in the relative rates of reproduction in the inferior and superior classes is to prevent in some way the multiplication of the former and to encourage it in the latter.

In the former early marriages and many children is the rule. In the latter late marriages and fewer children.

The difference between the editor's and treasurer's reports is due to the one item of \$609.70, which is entered on THE JOURNAL books in December, 1909, and on the treasurer's books in January, 1910.

Nature preserves the balance by killing the unfit, in all living species except man. Savage races are subject to the same law. We who are moral and humane, and have not in our own hands the issues of life and death, must preserve and elevate the race by preventing the unfit from ever coming into existence at all. We must replace Nature's relative death rate by an intelligent relative birth rate, says Saleeby in his "Outlines of Eugenics." This is merciful and supremely moral; it means vast economy in life, and money and time and suffering. It is natural at bottom, but it is nature raised to her highest power, in the moral intelligence of man.

In view of these truths your committee recommends that the state committee on public policy and legislation be charged with the duty of continuing the agitation in published articles in our journal, and through other channels for the education of the profession and the people, and that a bill embodying the principle of sterilization of habitual criminals shall be introduced for enactment at the next session of the Ohio Legislature.

D. R. SILVER,
J. W. CLEMMER,
BEN MCCLELLAN.

W. W. Brand offered the following: The House of Delegates, in session at the annual meeting of the Ohio State Medical Association at Toledo, having read and being aware of the contents of Senate Bill No. 6049, by Senator Owen, to establish a national department of public health, appreciates the importance of this bill as a necessary measure to conserve the public health, which has become one of the vital problems of this government, in peace as well as in war, does therefore,

Resolve, That the Ohio State Medical Association heartily and unqualifiedly endorses Senate Bill No. 6049, to establish a department of public health, and commends the attitude of Senator Owen and of President Taft in recommending such action in his presidential message. Be it further

Resolved, That a copy of these resolutions be sent to each of our United States senators, and to each member of the House of Representatives of this state, and to Senator Owen, the author of the bill.

On motion, duly supported, the foregoing resolutions were adopted.

The House of Delegates then adjourned to meet at 7 p. m.

The House of Delegates called to order at 7:15 p. m. by President Snyder.

REPORT OF CHAIRMAN OF COUNCIL.

Mr. President and Members of the House of Delegates:

Since the last meeting of the Association at Cincinnati, the Council has held four meetings as follows: At Columbus, November 2, 1909, January 20, 1910, March 15, 1910, and at Toledo, May 10, 1910.

Many matters of importance to the society are constantly coming up, and demanding attention during the interval between meetings of the Association. It might be well if the House of Delegates would confer certain contingent authority upon the Council in order that vacancies in the offices of Secretary, Treasurer, Editor, of Councilor, occurring between annual meetings of the Association might be provided for until the regular time of election when the House of Delegates is met in regular session. This necessity has arisen in the past and would have caused very great expense to the society and loss of time to the members of the House of Delegates if the council had not ventured to deal with matters not specifically placed in its hands.

The Council, probably, ought to meet oftener than has been the rule in the past, and it might be best to have meetings at certain definite dates, in order that questions of ethics and discipline might be considered with as little delay as possible. More frequent meetings of the Council would tend to uniformity in organization and methods of the county societies composing the several districts in the state, and in this way the members of the profession would be brought more closely together and would know and understand each other better.

During the past year there have been no questions of discipline or ethics of great gravity brought to the notice of the Council or individual councilors, indeed, the society has reason for congratulation in the fact that peace and harmony has been the rule throughout the state and throughout the year.

The Council has been impressed by the necessity of a thorough revision of the constitution and by-laws of the Association in order that real or apparent conflicts may be reconciled, verbal redundancy purged away, and some very important provisions incorporated in order that the provisions of the instrument may be fairly terse and thoroughly clear. The proper construction of every important provision ought to be as plain, on its face, as it is possible to make it. There are numerous points on which the Council, after ten years of study, have not been able to reach complete agreement. The relation of the Council to the Association is, in some respects, not as

clear as it ought to be. This has led to a growing disposition in the House of Delegates to discredit and "nag" the Council by expressions of distrust and suspicion, in speeches, resolutions and proposed amendments to the constitution and by-laws.

The House of Delegates at its meeting in 1908, instructed the Council to consider the advisability of forming a section on "Hygiene and Public Health," and to report its conclusions to the following annual meeting. This matter was carefully considered and the council, with one voice, agreed to recommend to this House, the organization of such a section. The report is belated for lack of opportunity to present the matter to the House of Delegates at the annual meeting in 1909 at Cincinnati.

It is hoped that the House of Delegates will now see its way clear to act promptly and, at this meeting, add the section on "Hygiene and Public Health" to the list of efficient working groups already in existence. The trend of the times is strongly in the direction of more strenuous and systematic work in conserving human health and life.

It would seem to be wise to use great care and deliberation in further increasing the number of sections, as it is already somewhat difficult to secure proper meeting places and to avoid undesirable conflicts.

There has been a good deal of discussion in the council during the year of the advisability of increasing the number of councilors, which would also involve an increase in the number of districts. It was substantially agreed that, since the work of organization has been completed, and much of the work of the earlier years has been cut out, it is not best to increase the number of districts.

The proposal to reconstruct the districts by changing the lines was also carefully looked into and it was found that each person consulted could suggest some change when the new lines did not affect his own district. The general disposition was to stand by the present district lines. In fact it seems impossible to divide the state into districts which would secure accessibility to a greater degree than results from the present arrangement.

There is apparent a certain distrust of the council, which seems to be cultivated for a purpose only to be conjectured, which crops out at each meeting of the House of Delegates and makes itself known mainly in an effort to shorten the term or encroach upon the rights and duties of the Council. This suggests the great importance of selecting the best available men as coun-

cilors. The attitude of a small element in the House of Delegates and of some of the officials, at times, toward the Council, will eventually operate to prevent the acceptance of the office by the quality of men which ought to be selected, in order to make secure the welfare and progress of the Association.

It was probably a wise arrangement to have the term of the councilor five years in the first place, when organization was the most important work. It is now not so important, though it is perhaps still wise to maintain the five year term. However, if it is best to shorten the term, and the number of districts cannot be changed without injury to the work, the term would have to fall to the other multiple of ten—namely *two years*. In this case *five* councilors would be elected each year to serve two years.

By this arrangement inefficient councilors would soon gravitate out of office, and efficient officers could be re-elected. It should be remembered that the councilor is not an officer of the district, but of the State Association, as really as the president, and consequently the delegates as a whole, have a right to be interested and to control the selection of these officers.

Respectfully submitted,

T. CLARK MILLER, Chairman.

For the First District, Robert Carothers, of Cincinnati, said that all was peace and harmony.

The remaining districts which responded said the chairman had reported for all.

C. W. Moots of Lucas county offered the following amendments to the constitution and by-laws:

"Article VIII, Section II: The secretary and treasurer shall be elected for terms of five years and the councilors for terms of three years, the councilors to be ineligible for re-election until two years have elapsed."

"Article VIII, Section III: The officers, except the councilors, shall be elected by the House of Delegates. The councilors in each district shall be nominated by ballot at a district meeting of the members comprising the district such councilor is to represent. The name of this nominee will be presented to the House of Delegates for election."

On motion of T. Clarke Miller, duly supported, it was ordered that a committee of three be appointed to examine the proposed amendments to the constitution and by-laws, and report at a later hour.

On motion, duly supported, J. H. Seiler reported for the Central Secretary's Committee. The speaker said he felt the committee was an unnecessary thing; that the work overlapped that

of the councilors, and should be done by them, thus saving expense.

A. J. McNamara, of the committee on the president's address, reported as follows: It is a great pleasure to review the message of our president. Those of you who were here this morning know of the suggestions that he made. There are many of them which will have to be taken up separately, instead of reporting on the matter as a whole. Some of them will cause discussion. One of the most valuable points brought out by the president was in regard to the bureau of publicity. We know things which should be put before the public by people who have literary methods. There should be a man stationed at Columbus who will keep after the work the medical profession is doing, and get it before the public in the right light.

Another thing along the same line, which may appear on the face a little foolish, is the question of advertising by the physician or the county society. One of the reasons it is practically impossible to get legislation is that we are being fought by the newspapers. Almost every bill introduced has contemplated curbing the sale of patent medicine. The daily papers in the large cities will not be affected like the papers in the small towns. If you cut this advertising out the paper will not exist, and that is why they are banded together and fighting the doctors.

Another suggestion is that the county society or the state society arrange to buy space in which to educate the public along the lines of preventable disease and symptoms of disease, and when a physician should be called. Some have advocated the listing of the physicians' names who belong to the county society, stating that the public may know that in calling any of these it is getting a good, reputable physician. This committee suggests that a committee of three be appointed to consider the feasibility of taking up this point of the president's address.

The president also dwelt at length on the question of our STATE JOURNAL. He showed us how THE JOURNAL is not a success financially, and how we have to fall back on the state organization for funds, but it is suggested that the secretary in each county shall see the people dealing in physicians' supplies, drugs, etc., and try to get advertising from them; that the physician merely mention to each of these that it will be well for them to carry a card in THE STATE JOURNAL.

It is suggested that district censors be appointed to keep in touch with the activities of the various county societies.

Next, that a committee of three be appointed

to study the state institutions, to wait on the governor, asking him to appoint a board of trustees, and to furnish him a list of physicians suitable for appointment to such positions.

That the plan for a defense league be adopted.

That a committee be appointed by the chair to edit the constitution and by-laws of the Association, so that they may conform to the amendments that have been passed or shall be passed at this meeting, committee to report at the next annual meeting.

The committee on advertising and public policy will be provided through the nominating committee as suggested.

Going over the address of the president, the committee decided to present the following resolution:

Be It Resolved by the House of Delegates of the Ohio State Medical Association, That Article 8, Section 1, of the constitution and by-laws be amended by substituting the words "president elect" for the word "president."

That Article 8 be further amended by adding Section 4 and Section 5, to read as follows:

"Section 4. Any office may be declared vacant by a majority vote of the members of the House of Delegates, if in their judgment the incumbent is inefficient."

"Sec. 5. Any office so vacated shall be filled at the session at which the vacancy is declared in the usual manner."

Be it resolved, That Article 12 of the constitution and by-laws be amended to read as follows:

"Article 12—Amendments: The House of Delegates may amend any article of this constitution by a two-thirds vote of the delegates registered at any annual session; provided, that notice of such amendment shall have been given by publication in THE JOURNAL two months prior to the session at which action is to be taken, and presented to the session at its first meeting."

On motion of W. W. Brand, duly supported, the report was adopted and it was ordered that steps be taken to put the plans suggested into operation.

W. J. Stone read the following plan of defense submitted by the committee appointed:

It is suggested that the various county societies of the state take under consideration the following plan which shall become operative when ratified by the House of Delegates and when adopted by two-thirds of the county societies of the state, by a two-thirds vote of the members present at a meeting duly called for the purpose; the plan not to become operative unless formally adopted by two-thirds of the counties. The per capita dues of all county societies which adopt the plan shall be increased one dollar, making the total assessment two dollars and fifty cents for such counties; the per capita dues of all

county societies which do not adopt the plan shall remain as at present, one dollar and fifty cents. To avail himself of the services of the Medico-Legal Committee, provision for which is outlined below, and the state attorney, each member must pay his dues by July first of each year, and no member shall be considered in arrears until after July first. No member shall be defended by the Medico-Legal Committee, or its attorney, for cause of action which arose while in arrears nor for any cause of action which arose prior to the inauguration of the work of the Medico-Legal Committee or prior to the formal adoption of the plan by the county society of which he is a member.

It is suggested under Chapter 9, Section 1, of the constitution and by-laws of the Ohio State Association, under Committees, that such by-laws be amended to include a Medico-Legal Committee. This Medico-Legal Committee to be made up of five members, three to be elected by the House of Delegates, two to be appointed by the president, two members of such committee to be residents of a city in the state from which the work of medical defense is to be directed. The members of such Medico-Legal Committee to draw lots, one to retire each year, his successor to be annually appointed by the president of the state society or to be annually elected by the house of delegates. The executive officers of this committee shall consist of a chairman, a secretary and treasurer, all of whom shall be elected by the committee and who shall serve without compensation with the exception of the chairman, who shall receive a nominal salary for his work; the exact sum to be determined by the House of Delegates or the committee itself. This committee shall have power to employ a firm of attorneys experienced in medico-legal work at an annual retainer fee, which firm shall serve as advisors of the committee. This committee shall also appoint upon the advice of the councilor of each district society, a correspondent for each county society, who shall hold office subject to the approval of the committee. It shall be the duty of such county society correspondent to receive formal application for defense in any threatened suit or any suit filed against members of his county society, such formal application to consist of a written statement from the member desiring defense, containing all facts, the names of witnesses and nurses and attendants and the dates of his first and last professional care in connection with the alleged cause of action. Such application for defense shall be forwarded at once to the chairman of the Medico-Legal Committee, who shall

receipt for it. The member desiring defense shall sign a statement granting authority to the Medico-Legal Committee and its attorneys to defend the action and granting the committee and its attorney sole power to conduct the defense and agreeing not to compromise or settle the claim for damages without the consent of the Medico-Legal Committee and its attorney; such statement shall specifically agree that no sums awarded in settlement, compromise or verdict shall be paid by the state society or its Medico-Legal Committee and that each member applying for the services of the Medico-Legal Committee or its attorneys agrees not to obligate the state society or its Medico-Legal Committee in any manner to the payment of any sums whatever. The treasurer of the state society shall collect the per capita dues of members as heretofore and forward on the first of each month a statement and remittance of such portion as has been collected for Medico-Legal Defense from members in county societies which adopt the plan, to the treasurer of the Medico-Legal Committee. The treasurer of such Medico-Legal Committee shall give bond for \$1000. No disbursements are to be made except by action of the executive officers of the Medico-Legal Committee, and all checks to be signed by the treasurer and countersigned by the chairman of such committee. Such Medico-Legal Committee shall annually report to the state society through its chairman the suits brought to the attention of the committee and the disposal of them, together with a financial report covering all disbursements and receipts.

On motion, duly supported, the privilege of the floor was extended to Dr. F. B. Tibbals, of Detroit, who spoke as follows:

I have been very much interested in this question of medical defense, as a result of my own personal experience. At a time some six years ago when I was insured in an insurance company and had paid three annual premiums of twenty dollars each, I was obliged to defend myself in a malpractice suit, and I got to thinking and said, "What is the use?" We had in Wayne county a little off-shoot of the county society, in which we had the first year 100, the second year 125, each man paying five dollars per year. We then undertook to take care of every member of the county society. During the five years of our operation we have had twenty-five to thirty cases abandoned. Two have come to trial, but for the last two years there have been no malpractice cases in Wayne county that have gone further than a mere threat against the doctor. The work in the county has been so successful that the other counties throughout the state

wanted it. Our Association last September adopted a plan which went into effect January first. Our work is just begun. Dr. Stone has worked carefully on this plan which he has suggested, and it is a plan feasible for immediate adoption by the House of Delegates. The adoption of this proposed plan does not adopt the work until your action is ratified by two-thirds of your county societies. That leaves it optional with each county whether it will come in or not. There is no question but that within a few years every state in the Union is going to have some plan of medical defense, as a part of the work of the State Association. It will be the means of protecting the doctor who is sued or threatened with suit by an ungrateful patient. This is proven absolutely by the work in New York State, where for nearly ten years this plan has been in force. At the last meeting of the New York State Medical Society, their council reported as follows: "No year in the history of organization of the medical defense has been so successful in the stamping out of blackmailing cases as the present. During no year has the work met with such enthusiastic support by the medical profession as the one just passed. The success of organized defense in the hands of the society has been demonstrated."

The experience of other states is similar. A state association medical defense league is prophylactic. There is no question but that medical defense in the hands of your state organization will do more to prevent malpractice suits in the future than any other plan. Again, it is cheap. You get the protection for actual cost. There is no profit to anybody, and through the Association you can take care of these cases more cheaply than they can be taken care of in any other way.

W. W. Brand moved that the report of Dr. Stone be accepted, and that the House of Delegates proceed to put the plan into operation. The motion was seconded by Dr. McNamara.

DISCUSSION.

Willard J. Stone: Our Lucas County Defense League was organized in 1906. We were largely influenced and advised by Dr. Tibbals, who came down and outlined the plan of action as carried out in Wayne county at Detroit, and this was formally adopted by the Academy at Cleveland. We were obliged to make the annual dues five dollars. We have accumulated \$800 without having to pay out damages, with accrued interest, and at the next annual meeting we shall probably reduce the dues to one dollar. Of course this will go out of existence if it is taken up by the state organization. Our executive committee

consisted of President Snyder, Dr. Brand and myself. We have had some eight or nine suits, or threats of suits, but none have come to trial. Each of these suits would probably have cost the physician \$1000 to defend, and inasmuch as this is a fighting league, for defense and not for the payment of damages, we have no doubt most of these cases will be dropped, because we will carry them to the supreme court before we will allow a judgment to be paid by the physician. If a physician has a suit brought and he takes it to a firm of lawyers of medico-legal experience, and they have experience adequate to defend such a suit, it will cost him from \$800 to \$1000. It means a great deal. It means that many times the suit is not successfully defended, and he is advised to pay, and it brings serious injury to the reputation of the physician. We do not propose to let that sort of thing happen. We will carry through the two suits that will probably come to trial to the highest court. I can only say our local league has been a great success. It has made the members of the Academy more careful in their criticism of the work of their colleagues. I hope the House of Delegates will feel that they can adopt the suggestion brought to them, and that when they get back to their respective districts with it, they will do everything possible to get each of their county societies to formulate such a plan.

J. E. Tuckerman: I am very much interested in these reports, particularly because of having the privilege of reading some twenty state journals either run by or having the transactions of state societies, and I have yet to recall a single journal that has anything but good to say of this method. Every society that has adopted the method likes it. I am sure that when adopted in Cuyahoga, many will be glad to come in out of the wet. One of the physicians in our city has a judgment against him for \$5000. The suit has been in the course of prosecution for close on to a year, if not more, and yet it is perfectly evident that it could not have occurred except that we have no physicians' defense in that city. It is the sort of a case where the physician is not at fault, but the question is to make the jury see it. Another thing is, that when you have this plan, it keeps the physicians who see a case after you have seen it from saying, "If you had come to me in the first place, you would not have had this trouble." Not many years ago one of our men was nearly bankrupted, although he won his suit. It practically bankrupted him to defend himself. This does not contemplate indemnifying the physician for a loss; it does warrant that he will have efficient defense. I

think no suit should be undertaken by the society, unless there is the distinct understanding that the suit is not to be settled except with the consent of the parties defending it.

T. Clarke Miller: If I understand, the motion was to adopt the plan of defense. I do not think that expresses just what you want to do. I think the idea is to submit this to a vote of the county societies and districts.

The Chair: The adoption of the report is the meaning of the motion.

W. W. Brand: I accept the modification that it is to be submitted to the county societies for approval.

W. J. Stone: If each county society adopts the plan—if two-thirds of the counties in the state adopt the plan on a two-thirds vote of the members—then the plan becomes operative for the society, and the per capita dues will increase from one dollar and a half to two dollars and a half. If two-thirds of the counties do not adopt it, the suggestion will not go into effect.

F. P. Anzinger: If Clark county has sixty members, and we adopt it, would we have to pay on this per capita of sixty?

W. J. Stone: If you have sixty members and thirty-six are present at the meeting to consider this plan, and twenty-four of the thirty-six agree to vote for the plan, that twenty-four vote means that all the members of Clark county, if there are sixty, must have their dues increased from one dollar and a half to two dollars, and every one of them will receive medical legal defense.

The motion was then voted upon and carried.

On motion of W. W. Brand, duly supported, the councilors were instructed to organize a section on sanitary science and hygiene and to appoint a provisional chairman and secretary to act at the next annual meeting.

The secretary read a telegram from Dr. C. A. L. Reed, regretting his inability to be present, and urging the endorsement of the Owen bill and the Dodds bill.

The official call of the American Medical Association was read. Upon motion the House adjourned to meet Thursday, May 12, at 1:30 p. m.

The House of Delegates was called to order on Thursday, May 12, at 2:30 p. m., Vice-President H. R. Geyer in chair.

The secretary called the roll, followed by the reading of a resumé of the minutes of the two preceding sessions. There being no objections, same were approved.

W. W. Brand: I would offer a resolution to expedite the business of the House, for the rea-

son that the hour is short and things should move along promptly:

The councilors of the Ohio State Medical Association are hereby directed to be present at all of the sessions of the House of Delegates. Councilors not present at any such sessions and who cannot give a reasonable explanation for their absence shall relinquish their office as councilor, upon the demand of the president of the Ohio State Medical Association. This resolution was objected to by T. Clarke Miller as being in effect a by-law, and therefore no action could be taken until the next session. The motion was passed, but on Dr. Miller's objection was declared out of order.

On motion of Dr. McNamara, duly supported, the following was adopted:

WHEREAS, It has come to the knowledge of the House of Delegates that a former president of the Ohio State Medical Society, Dr. William C. Chapman, who presided at the previous meeting in Toledo eight years ago, is now ill, be it

Resolved, That the sympathy of the Ohio State Medical Association be tendered Dr. Chapman in his illness and that they wish him a speedy recovery.

On motion, duly supported, the Hocking County Medical Society was granted a charter.

On motion, duly supported, a committee of three was ordered appointed to confer on the matter of a permanent emblem for the Association.

J. H. Seiler: Several months ago the county societies received a communication from a certain Dr. J. J. Boone of Harding county, who was arrested for not complying with the state registration law. He called on the societies for from three to five dollars to help him fight the case. It was laid upon the table in our county. I would like to present this resolution:

WHEREAS, Dr. J. J. Boone, not a member of the Ohio State Medical Association, residing in Hardin county, refusing repeatedly to file birth certificates, as required by the vital statistics act, and having been found guilty of violating this law by the common pleas court of Hardin county, and

WHEREAS, Dr. Boone, in an attempt to carry the case to the supreme court of Ohio, has solicited aid from county medical societies, and

WHEREAS, One or more component societies of the State Association have contributed financial aid in response to this solicitation, therefore, be it

Resolved, That no component society of the State Association can consistently give aid to the defense of any member violating the provisions of the vital statistics law, which was endorsed by the American Medical Association as the model registration law.

J. D. Bain: This J. J. Boone is not only a resident of the county in which I reside, but the district which I represent, and I heartily recom-

mend the passage of this resolution. He is not affiliated with our county society in any way. He has never asked any aid of his own county. If he has received aid from any other county, it has been without my knowledge. I have been told since I have been here that Marion county has given him the sum of five dollars. I wish to emphasize the fact that he is no child of ours and that I heartily endorse the resolution, and I hope it will be passed unanimously.

Question put and motion carried unanimously.

D. R. Silver presented the following:

WHEREAS, The integrity of the state medical practice act is menaced by the persistent attacks of the Christian Scientists, optometrists and others who seek legislation for special interests, and

WHEREAS, These onslaughts are likely to continue indefinitely, now, therefore, be it

Resolved, That the House of Delegates hereby charges the committee on public policy and legislation with the duty of obtaining an opinion from the supreme court of the state, defining the special scope and meaning of said act, in relation to the practice of medicine.

Resolved, That said committee is hereby authorized to bring suit at the expense of the State Association, under direction of its legal advisor, for the purpose above stated.

On motion, duly supported, the resolutions were adopted.

The regular order of business was then taken up, and H. C. Haning presented the following report of the nominating committee.

The nominating committee begs leave to report the following nominations:

President—R. E. Skeel, Cleveland; H. T. Sutton, Zanesville; Geo. Fackler, Cincinnati.

Vice-President—S. P. Fetter, Portsmouth; E. J. March, Canton; A. T. Speer, Newark; J. O. Starr, Pittsburg.

Councilor from Second District—R. H. Grube, Xenia.

Councilor from Seventh District—J. E. Groves, Uhrichsville.

Members of Committee on Public Policy and Legislation—Ben R. McClellan, Xenia; W. H. Snyder, Toledo; John Thompson, Cincinnati.

Member of Committee on National Legislation—Ben R. McClellan, Xenia.

Committee on Publication—Frank Winders, Columbus; John E. Brown, Columbus.

Medico-Legal Committee—Robert Carothers, Cincinnati; Wells Teachnor, Columbus; W. J. Stone, Toledo.

Delegates to A. M. A.—Geo. M. Todd, Toledo; B. H. Blair, Lebanon; Dana O. Weeks, Marion; J. W. Clemmer, Columbus. Ex-officio members,

J. H. J. Upham, Columbus; B. R. McClellan, Xenia.

Alternates A. M. A.—B. Frank Barnes, Newark; J. A. McCollam, Uhrichsville; D. A. Rannels, Logan; E. O. Smith, Cincinnati; Geo. Zininger, Canton; W. H. Humiston, Cleveland.

The committee begs to offer the following suggestion to the House of Delegates:

The committee earnestly recommends that the four vice-presidents, in conjunction with the presidents of the Ohio State Medical Association, divide the state into four (4) districts (unofficially, and visit at least once each year each county society with the president or councilor to better stimulate effective organization in the state society. Respectfully submitted,

H. C. HANING,
Chairman.

The secretary read the following communication:

"I hereby present my resignation as councilor of the Tenth District, owing to the press of professional work.

"(Signed) C. D. MILLS."

On motion, duly supported, the resignation was accepted, and the nominating committee was instructed to make a nomination for this vacancy and the name of Dr. Wells Teachnor of Columbus was submitted.

The chairman appointed as tellers Drs. Tuckerman, Brand and Monger. The House of Delegates proceeded to ballot for officers with the following results:

President, R. E. Skeel, Cleveland.

Vice-Presidents—S. P. Fetter, Portsmouth; E. J. March, Canton; A. T. Speer, Newark; J. O. Starr, Pittsburg.

Councilor from Second District—R. H. Grube, Xenia.

Councilor from Seventh District—J. E. Groves, Uhrichsville.

Members of Committee on Public Policy and Legislation—Ben. R. McClellan, Xenia; W. H. Snyder, Toledo; John Thompson, Cincinnati.

Member of Committee on National Legislation—B. R. McClellan, Xenia.

Committee on Publication—Frank Winders, Columbus; J. E. Brown, Columbus.

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Delegates to A. M. A.—Geo. M. Todd, Toledo; B. H. Blair, Lebanon; Dana O. Weeks, Marion; J. W. Clemmer, Columbus.

Alternates A. M. A.—B. Frank Barnes, Newark; J. A. McCollam, Uhrichsville; D. A. Ran-

nells, Logan; E. O. Smith, Cincinnati; Geo. F. Zininger, Canton; W. H. Humiston, Cleveland.

Chas. Graefe of Sandusky, in behalf of Erie county, invited the Association to hold its next meeting at Cedar Point. C. E. Parker of Cleveland invited the Association to meet in Cleveland.

These two localities were placed in nomination and on a standing vote Cleveland was selected as the next meeting place.

Drs. Bonifield, Tate and McNamara were appointed as a committee to escort the president-elect to the chair. He made a few remarks, as follows:

I might talk under some circumstances, but not when I am surprised, as I really am, and

therefore I have nothing to say excepting that I appreciate the honor, and I believe it is for the city rather than for the man, and I shall do my best to do honor to the city. I do not believe there are enough of you who know me to have elected me, regardless of the place from which I come.

On motion of W. W. Brand, duly supported, it was ordered that the next meeting be held in May, the exact date to be fixed by the committee of arrangements, officers and Council of this Association.

On motion the House of Delegates adjourned *sine die*.

Respectfully submitted,

J. H. J. UPHAM,

Secretary.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.

THE POSITION OF THE APEX BEAT IN CHILDREN.

"A recent study of the position of the apex beat in 500 children made by Stewart and reported in The British Journal of Children's Diseases for December, 1909, is of considerable value to the pediatricist. By tabulating the results in three classes, namely those in which the apex beat was outside, on, or inside the nipple line, fairly constant and interesting results were obtained. Under two years of age 66 per cent were distinctly outside of the nipple, 33 percent directly below it, and but 1 per cent inside. By the age of three years, however, the apex beat had moved in decidedly, and from then until eight years of age its normal position, or at least its position in 80 per cent of the children examined, was in the nipple line itself, while the proportion of those in which it was outside steadily sank from 20 to 5 per cent, and in the cases with the apex inside of the nipple as regularly rose from *nil* to 15 per cent. After the age of eight years the cases with the apex outside became distinct rarities, while the number in which the adult position was found uniformly increased, and those in which the apex was in the nipple line proportionally diminished. By ten years the second and third classes of cases were of equal frequency, and at fourteen the adult location was found in two-thirds of all cases. By dividing the cases into these age groups the normal position at any one time is easily remembered, and is a point of no small value in the

physical examination of the child's heart."—Editorial Med. Rec., Feb. 5, 1910.

FORMALIN IN TREATMENT OF EPITHELIOMA OF THE FACE.

Hallopeau and P. Fumouze (Bulletin de l'Academie de Medicine, Paris, Feb. 22, p. 185), report success by using formalin in treating epithelioma of the face. "In the two cases reported, the liquor formaldehyde was applied on a wad of cotton after the ulceration had been softened with moist dressings. The application was repeated four days later and after the thick eschar had been thrown off the lesion healed, leaving a smooth scar. There was no reaction in the surrounding tissues. The method is now being applied in a case of verrucous lupus with, the authors state, promising results to date."—Via. J. A. M. A., April, 1910.

VACCINE VIRUS.

In view of the occurrence of smallpox in various parts of the state, it may not be amiss to call to mind that vaccine, as it is now prepared, is a safe means and the only known means of escaping infection with smallpox if exposed to it. Those who have never seen a case or at worst have only seen the very mild cases have no conception of what it means to have the severe forms of smallpox, in comparison with which even a severe vaccination is nothing. Untoward result from vaccination are reduced to almost 0 by the care now taken in the preparation of the virus.

On this Rosenau (J. A. M. A., Jan. 22, 1910) says:

"The material is usually taken from the vesicles when fully developed, which may be somewhere between the fifth and eighth day after the animal has been vaccinated. It should be taken only from typical unbroken vesicles and is usually obtained by scraping with a curette. The vaccine pulp thus obtained may be purified with glycerin or other substances. Glycerin is best and is mixed with the pulp in the proportion of from 40 to 50 per cent. This acts as a preservative and antiseptic for the ordinary bacteria. It is impossible to exclude some harmless bacteria from the virus, strong antiseptic measures being impracticable we must depend on cleanliness and asepsis in every stage of the production.

"The old-fashioned dry points are more liable to be contaminated and the new federal regulation prohibits interstate traffic in them. Manufacturers have made an imitation of these dry points, which furnishes a very convenient method of vaccinating, by putting a drop of glycerinated virus on ivory or glass points, hermetically sealed in paraffin or glass. These are safe and satisfactory.

"All vaccine virus is tested according to modern methods for virulent germs and these tests include animal inoculations. The tests must be satisfactory before the virus is placed on the market. Special tests are made to determine the absence of foot-and-mouth disease and tetanus spores. All establishments manufacturing vaccine virus for the interstate traffic must be under government supervision."

THE ABDOMINAL WATERSHEDS AND THEIR INFLUENCE ON THE LOCALIZATION OF INTRAPERITONEAL INFECTIONS.

C. R. Box (The Lancet, March 26, 1910) "divides the peritoneal cavity into various watersheds or drainage regions and discusses the tendency of lesions in the cavity to drain in accord with the directions of these regions. When a purulent infection begins to descend the declivity which slopes from the pelvic ridge toward the right loin it naturally tends to travel along the ascending colon which lies on this slope. The colon being usually more or less distended divides the slope into two gutters to which the names external and internal paracolic grooves have been applied. The external which lies between the colon and lateral abdominal wall leads directly to a well around the head of the right kidney. To this well also the mesocolic slope

tends to direct effusions poured out in the upper part of the abdomen. Thus the right renal well or subhepatic pouch is of importance not only in connection with lesions in the upper part of the abdomen but also with the more common lesions of the appendix. Ascending infections may not only affect the right renal well but tend to make their way between the left lobe of the liver and the lateral wall of the abdomen into the right subphrenic space. Above the mesocolic shelf (transverse colon in connection with the great omentum) there are three situations in which suppuration may occur. First, the pus may lie in the right dome of the diaphragm constituting the true right subphrenic abscess. Second, it may lie in the left dome occupying part or all of the space known as the stomach chamber; this is the left subphrenic abscess sometimes called perigastric or perisplenic from the relations it bears to the stomach and spleen. Third, pus may lie below the right lobe of the liver in the recess known as the right renal well, right kidney pouch, or subhepatic fossa. When the purulent collection is very extensive its distribution may be widespread so that all the cavities are simultaneously involved. The author gives the clinical histories of four cases which illustrate the anatomical points. The treatment of all these forms of abscess is essentially surgical. Drainage is called for. Localization takes from seven to ten days or more. Dangers of secondary diffuse peritoneal infection, infection of the pleural sac and lung, and of portal pyemia are always present. The findings of the aspirating needle are often fallacious. It should never be used for puncture below the ribs nor below the diaphragm on the left side. In doubtful cases exploratory incision is the safest course in the long run. Extensive right subphrenic abscess caused by recent rupture of a gastric or duodenal ulcer is usually first explored from the front and if the pus collection is found localized, posterior transpleural drainage is usually adopted. If due to appendicitis it may be treated by an incision high up and far back in the flank but if the collection is of any magnitude it is better to open the subphrenic space higher up by the transpleural route, steps being taken to shut off the pleural cavity. The author advocates the Fowler position as the one in which appendicitis cases should be nursed. This position has the merit of preventing ascending infection but it favors drainage into the pelvic cavity and this fact should not be lost sight of.—Med. Record.

The cessation of severe pain during the course of acute appendicitis often means perforation.

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKee, Collaborator.

Adams County Medical Society met April 13 at West Union. Program was as follows: "Some Interesting Cases," J. E. Rogers, Peebles; "Immunity," O. E. McHenry, Blue Creek; clinical reports.

Cincinnati Academy of Medicine, program for May: May 2, Section on Specialties. Paper, "Lichen Ruber Acuminatus, With Report of Case," Edw. H. Shields. Abstract: Some authorities claim that it is not the same disease described by the French under the name of pityriasis rubra pilaris. I hold that the two diseases are one and the same. Paper, "Surgical Treatment of Trachoma," S. C. Ayres. Abstract: Various methods in vogue; scarification, grattage, excision of retrotarsal fold of conjunctiva, expression. Case report, Aural vertigo, pressure on the chorda tympani nerve, numbness of the tip of the tongue and lips, S. C. Ayres. Case report, Pus tubes in the male, symptoms and treatment, E. O. Smith.

May 9—Surgical Section—Nitrous oxide-oxygen anesthesia; report of cases; demonstration, H. J. Whitacre. Paper, "Some Phases of the Surgical Treatment of Gastric Ulcer," W. D. Haines. Abstract: Value of test meal in connection with clinical history. Intimate association of stomach, duodenum, liver and pancreas, functionally and pathologically. Beneficial influence of drainage of the gall-bladder and ducts in gastric ulcer. Discussion by H. J. Whitacre and Jos. Ransohoff.

May 16—Medical Section; Symposium on Tuberculosis. Paper, "The Relation Between Bovine and Human Types of Tubercle Bacilli," W. B. Cherry. Abstract: A discussion of the identity, variation and transmissibility of the two species. Paper, "Systemic Manifestations of Tuberculosis," B. F. Lyle. Abstract: In tuberculosis the lesions are more or less general in extent and diverse in character. The recognition of these facts is necessary for proper treatment. Discussion by P. G. Woolley, pathological; Casper Hegner, surgical; Frank Lamb, pediatric; Louis Ransohoff, orthopedic.

May 23—Special Meeting, Symposium on Prevention of Diseases. "By Municipalities," J. H. Landis, health officer of Cincinnati; "By States," C. O. Probst, Columbus, O., Secretary Ohio State Board of Health; "By the National Government,"

C. A. L. Reed, member of committee of one hundred.

May 30—Case Reports.,

"Medical Giants of France" was the title of an illustrated lecture before the Cincinnati Academy of Medicine, April 25, 1910, by Francis Dowling. He spoke of Ambrose Pare, the father of military surgery; Barron Larry, Napoleon Bonaparte's surgeon-in-chief, who was the first to amputate at the hip joint for gunshot wounds; Laennec, the noted pathologist; Dupuytren; Bichat; Pinnel, the noted alienist, the first to strike off the shackles from the insane; Belceau and Nelaton, the latter a millionaire, and under whom many Cincinnati surgeons have studied. "From the ice lands of the North to the floral climes of the South, and from the land of the sunrise to the land of the going down thereof, have gone forth teachings from Paris, the center of human medical progress for the alleviations of the sufferings of mankind." Dr. Dowling said we not only owed a debt of gratitude to the French for what they had taught us, but also for the honor which they had conferred upon the members of our profession. He was voted the thanks of the academy for his interesting lecture, which also gave lantern pictures of the great men concerning whom he was speaking, also of the hospitals in which they taught.

The Brown County Medical Society met Wednesday, May 25, "Hemorrhoids," W. L. Faul; "Nasal Catarrh and Its Treatment," J. N. Ellison. "Brown County Medical Society," (historical sketch), A. W. Mitchell.

The Brown County Medical Society met in the council chamber at Georgetown on Wednesday, May 25.

J. N. Ellison, of Sardinia, presented a paper on "Catarrh of the Nasal and Upper Air Passages." Dr. Ellison stated that this important disease is not given the attention by the general practitioner that it deserves, and that he could and should give it. Polypus and chronic nasal discharges have their origin in diseased cartilage or bone, and are immediately under the eye of the physician. There is therefore no excuse for a failure to make a proper diagnosis if care is taken. He should be thorough in all of his examinations and if an area of diseased bone or cartilage is detected should proceed to remove it.

In the more superficial cases he should be able to do this himself by the aid of local anesthesia, or even a little chloroform if necessary, though the more serious and deeper seated ones would require the specialist. No amount of spraying will cure until the cause is removed.

A. W. Mitchell gave a historical sketch of the Brown County Medical Society. This disclosed the fact forgotten by all, that the society was born in Ripley just fifty years ago. It was then named the Medical Society of Brown and Adams Counties, which name it retained until 1867, when it was changed to the Brown County Medical Society.

SECOND DISTRICT

R. H. GRUBE, M. D., Collaborator.

The Shelby County Medical Society held its monthly meeting May 15. A. W. Grosvenor was the essayist and he read a carefully prepared paper on "Asthenopia of Nasal Origin," in which he pointed out the fact that some of the most distressing eye symptoms, such as inflammation and pain in that organ, are caused by disease of the nose and must receive treatment accordingly.

Of course no one but a properly educated physician can discover or treat such a condition, which is but another evidence of the falsity of the claims of the so-called optometrists. Men who fit glasses or do any other kind of work for the relief of painful or defective vision, must have a thorough medical training, or the public will receive damage rather than benefit.

After a free discussion of the paper the committee appointed at a former meeting to consider the subject of untruthful and fraudulent advertisements by druggists reported its findings, which follow:

WHEREAS, This Association regards its membership as the guardians of the public welfare in matters of health and disease, and, having in mind the evil effects of self-medication and indiscriminate drugging, fostered by many druggists and pharmacists, by untruthful advertising, thereby misleading and deceiving the people, now, therefore,

Resolved, That we desire to give public approval of the course pursued by Alexander White, of White's pharmacy of this city, who has consistently refrained from this kind of deception, refusing his name and influence in the sale for personal gain, of fraudulent and harmful patent and proprietary medicines.

Resolved, That the financial sacrifice made by the above named pharmacist in the interest of public morality, honesty, and fair dealing deserves recognition, not only by every physician of this city and county, but by the public as well.

Resolved, That a copy of this action be furnished Mr. White and that the same be published

in THE OHIO STATE MEDICAL JOURNAL and the Journal of the American Medical Association.

It is thought that this recommendation of the committee, fully endorsed by the society, is the first of its kind in the history of medicine. The intimate relations which ought to exist between pharmacy and the profession of medicine is being jeopardized by the conduct of men who believe that business success warrants untruthful pretensions.

The profession of medicine is now engaged in a campaign of education for the public and it is hoped that this action will aid in the good work.

The next meeting will be at Troy with the Miami County society in June. M. F. Hussey of this city will read a paper on a psychological subject, prepared for the occasion.

A meeting of the Clark County Medical Society was held on April 11. Diagnosis of Tuberculosis.—"Special Aids to Diagnosis; Tuberculin Tests; Tuberculin Test of Koch," by F. P. Anzinger. "Ophthalmo-tuberculin, Conjunctival, Reaction; Wolff-Eisner, Calmette," C. L. Minor. "Thermometry; Experiments on Animals; The Roentgen Rays," W. P. Ultes.

Clark County Medical Society met April 25. Propaganda Against Tuberculosis—Methods; Treatment; Legislation, Henry Baldwin.

A meeting of the Clark County Medical Society was held on May 2. Postgraduate course. Subject, Pharmacology. "Nature of Pharmacologic Action," C. H. Kay; "Methods of Administration of Drugs; Untoward Effects of Drugs," W. C. Taylor.

"Pharmacologic and Therapeutic Actions of Drugs" was the general subject for discussion at a meeting of Clark County Medical Society on May 9. "Drugs Acting on the Blood," R. H. Jones; "Drugs Acting on the Skin," P. W. Brown; "Drugs Acting on the Urinary System," T. M. Reade.

At the May 16 meeting of the society a paper on "Drugs Acting on Respiration" was read by J. O. Davy.

Montgomery County Medical Society met May 6, with the following program: "The Early Diagnosis of Gastric Carcinoma," D. B. Conklin; "Repair of the Perineum," H. H. Hatcher.

THIRD DISTRICT

H. B. GIBBON, M. D., Collaborator.

At the meeting of the Allen County Medical Society April 5, T. R. Terwilliger read a paper on "Carcinoma of the Cervix." Figures were

given showing the relative frequency of malignant trouble in this locality and some interesting cases were cited. A good discussion followed the reading of the paper.

On April 19, D. M. Steiner read a very timely paper on "The Consultation." The subject quite fully presented with special emphasis upon such phases as the conduct of the consultant in the presence of the patient and family, also toward his brother practitioner in charge of the case, and his duty to the patient and family. An earnest discussion followed the presentation of the paper.

At the meeting of May 3, A. S. Rudy told of "Some Signs of Pulmonary Tuberculosis." The doctor presented an outline including in its several divisions, not only the signs and symptoms of consumption, but also the various means and methods used in determining the exact condition present in any case. Lively discussion followed.

On May 17, W. E. Hover had for his subject, "Rest." Disability often is relieved by rest alone. In conditions which are immediately dangerous, rest is always enforced while in minor troubles and often in the beginning of serious disease as in the early stage of tuberculosis when rest is of such great importance—this feature of the treatment is often slightly or neglected entirely. A vigorous and instructive discussion followed the reading of the paper.

FOURTH DISTRICT

TODD DUNCAN, M. D., Collaborator.

The general meeting of the Academy of Medicine of Toledo and Lucas County was held on April 1. J. D. Greiwe, of Cincinnati, was present and read an excellent paper on "Irregularities of the Heart." The paper was discussed by L. C. Grosh.

The Medical Society of Wood County met April 6 with the following program: "Measles in the Born, the Unborn and the Resulting Operation," H. L. Byington, Rising Sun. "Report of a Clinical Case," E. W. Fisher, Portage. Legislation—Discussion of impending bills that will curtail the rights of the physicians—by the society.

The Pathological Section of the Academy of Medicine of Toledo and Lucas County met April 8 with the following program: "Cystic Degeneration of the Kidney," Todd Duncan; "The Biology of Pneumonia" (analytical), G. L. Tracy.

The Section on Eye, Ear, Nose and Throat of the Academy of Medicine of Toledo and Lu-

cas County met April 29. Program: "Nasal Suppuration; Remarks on Systemic Causes and Effects," with stereopticon illustrations, Thos. Hubbard. The discussion was opened by O. Landman and H. W. Dachler.

The Section on Surgery of the Academy of Medicine of Toledo and Lucas County met April 22. Program was as follows: "A New Method of Gastrostomy," John S. Pyle:

Mr. Chairman and Members of the Academy: I regret very much that the published announcement sent out by the secretary conveyed the idea that I would contribute something new on the subject of gastrostomy. I do not know that I have any ground for claiming a new method—it is perhaps only new to me. However, about one year ago I operated upon a patient suffering from cancer of the esophagus. Finding the gullet nearly closed and the glands of the abdomen involved, I decided, as a temporary measure, to make a gastrostomy. To overcome some of the unpleasant features attending the usual leakage from the gastric fistula, I carried a cone of the fundus of the stomach through an opening made in the diaphragm and out of the thorax in the sixth intercostal space where the walls of the stomach were stitched to the incised skin.

The opening in the diaphragm and intercostal space was made with a pair of sharp pointed haemostats which was used to separate the fibres of the intercostal muscle and diaphragm so the cone of stomach would be surrounded by a double constriction band to prevent the free escape of liquid chyme. The gastric fistula was not established until the walls of the stomach had united with the incised skin. It was my purpose to carry the fundus of the stomach upward to a point where the liquid contents could not spill or run out of the opening with the patient in the sitting posture. The elongation of the stomach by vertical stretching with the constriction at the artificial diaphragmatic and intercostal openings and the high level of the gastric fistula are points, I believe, of decided advantage, and worth considering in doing a gastrostomy.

The weight of the liquid keeps the chyme in the lower part of the gastric cavity and the double diaphragmatic and intercostal band together with a baby pacifier inserted in the artificial opening prevent the free escape of fluid which is so very common in the ordinary gastrostomy.

It is impossible to avoid some inflammation where the gastric mucosa is grafted upon the

skin. This, however, subsides in the course of a few weeks, due perhaps to a natural reaction against pepsin from the development of a specific anti-pepsin which confers upon the epithelial cells resistance to the solvent action of the gastric enzyme.

The sixth intercostal space was selected because it is at this level in front where the diaphragm is attached to the thoracic wall, and at this point it is possible by a little care to puncture the intercostal muscle and diaphragm without necessarily opening the pleural sac. I see no reason why the pleural sac should not be opened and the stomach carried to a higher level if it was thought desirable. The one great trouble experienced in making an enduring gastrostomy is the loss of the function of the stomach as a successful receptacle for the retention of liquids. Leakage of the liquid chyme is not only a source of very great annoyance but it keeps up more or less irritation and a painful inflammation of the skin. If the leakage can be in any way controlled a great benefit has been conferred, and here endeth my little contribution.

Discussion opened by W. G. Gillette.

"The Results of Prostatic Hypertrophy and Their Treatment," John G. Keller. Discussion opened by R. S. Walker.

The postponed meeting of Williams County Medical Society was held at Bryan April 14. Program was as follows: General subject, "Diseases of Stomach, Intestines and Pancreas." "Chronic Gastritis," J. A. Weitz; "Acute Hemorrhagic Pancreatitis," H. W. Wertz; "Etiology and Treatment of Chronic Diarrhoea," A. M. Wilber. Additional topics suggested: Physiology of digestion, gastric and intestinal; acute gastritis dilation of the stomach; gastric and duodenal ulcer; differential diagnosis of appendicitis.

FIFTH DISTRICT

H. G. SLOAN, M. D., Collaborator.

The Ophthalmological and Oto-Laryngological Section of the Academy of Medicine of Cleveland held their forty-seventh regular meeting Friday, April 22, at the Cleveland Medical Library. Program was as follows: "Results in Five Cases of Sinusitis Treated by Lactic Ferments," W. J. Abbott; "Report of a Case of Conjunctivitis With Peculiar Infection," C. C. Stuart; "The Fergus Operation for Ptosis," Edward Lauder; "Injury of Eye By Glass, Localized by X-Ray," W. E. Bruner.

Lake County Medical Society met May 2. Gen-

eral discussion, subject: "If Limited to the Use of Six Drugs in Your Practice, Which Would You Choose, and Why?"

The sixty-eighth regular meeting of the Clinical and Pathological Section of the Academy of Medicine of Cleveland was held April 1, with the following program: "Exophoria, with Some References to Its Causes, Reflex Disturbances and Treatment," Edward Lauder; "Exostosis of the Os Calcis," G. J. Bauman; "Some Experiences in the Treatment of Various Forms of Hernia," C. A. Hamann.

The Ashtabula County Medical Society held its fifty-second regular meeting Tuesday evening, April 5, in the Business College, corner Main and Spring streets. A paper on "Appendicitis in the Hands of the Country Doctor," was read by V. H. Tuttle, Orwell. Report of clinical cases and general discussion followed.

The Ashtabula County Medical Society held its fifty-third regular meeting on the evening of May 3 at their usual meeting place. The paper of the evening, "The Frequency and Importance of Adenoids in Children," was read by J. A. Dickson, of Ashtabula, after which reports of clinical cases were given and general discussion followed.

SIXTH DISTRICT

A. J. MARCH, M. D., Collaborator.

The Summit County Medical Society held its regular meeting for May on the evening of the third. The program consisted of a paper by Thomas K. Moore, of Akron, taking for his subject the "Etiology of Headache," which was very instructive and was freely discussed. The society will have one more meeting, June 7, before the summer vacation during the months of July and August.

The Summit County Medical Club held its annual banquet at the Portage Country Club, Akron, on the evening of May 2, at which event Dan Millikin, of Hamilton, was the distinguished guest of the club and addressed those present on "The Irrepressible Savage." The affair was a complete success socially and the address by Dr. Millikin was the best that has been enjoyed by the club in years, if not since its organization.

The Summit County Health Protective Society held its quarterly meeting at the First Baptist church in Akron, May 10, at which Miss Elsie B. Meade, Akron's district nurse, told of her work

among the indigent sick and especially of the work in connection with the medical inspectors of the public schools. G. M. Logan read a paper reviewing the work done by the medical inspectors in the Akron schools the past year, pointing out the great need and value of such work and suggesting some changes which if made would make the inspection more effective and urged the use of the school nurse in more cases than she had been used this year. This would necessitate the employment of more nurses.

F. H. Lyder, a dentist of Akron, presented a paper showing the need of more buccal hygiene and more intelligent care of the teeth among children of school age.

Dr. Bishop, of Cleveland, gave an illustrated lecture on tuberculosis in which he told in unmistakable terms how the disease is communicated from one to another, how prevented, and how best cared for in its various stages of infection.

After his lecture a vote of thanks was tendered Dr. Bishop for visiting Akron and giving such a splendid lecture and a resolution was passed by the society urging the county commissioners to be more active in their efforts in bringing about the completion of the sanitarium for the treatment of tuberculous patients.

The annual meeting of the trustees of the Akron City Hospital was held at the hospital April 20. All of the former officers were elected. They are O. C. Parber, president; Col. Geo. T. Perkins, vice president; H. J. Blackburn, treasurer; A. H. Cummins, secretary. The reports show that the year just closed has been the busiest of any year in its history. The hospital was planned for a maximum capacity of eighty patients, but this year there has been a general average of seventy-two patients in the house continuously, and sometimes as many as ninety have been cared for at one time. Space intended for twelve beds has been occupied by as many as twenty. At times many patients applied for admission that could not be admitted. During the last year 26,505 days nursing were done by the training school—an increase of 5,772 days over last year. The trustees appointed the same members that were on the staff last year, with the addition of Drs. Wm. Parks and Robert H. Smith, who were appointed to the staff of house physicians and surgeons.

The annual business meeting of the hospital staff resolutions were passed regarding the death of Wm. Murdock, former vice president of the staff, and officers for the ensuing year were elected as follows: H. H. Jacobs, president; L.

S. Sweitzer, vice president; J. N. Weller, secretary.

A meeting of the Portage County Medical Society was held May 19. C. E. Held, of Akron, addressed the society on the "Treatment of Pneumonia." C. O. Jaster delegate to the Toledo meeting, made a report of the meeting, which was accepted. W. G. Smith reported "Medical Views of a Recent Western Trip."

SEVENTH DISTRICT

S. O. BARKHURST, M. D., Collaborator.

An open meeting on tuberculosis was held by the Tuscarawas County Medical Society April 5. The teachers of the Uhrichsville and Dennison schools attended. J. E. Groves read a paper on "What Every One Should do to Prevent Tuberculosis." The paper was generally discussed.

NINTH DISTRICT

S. P. FETTER, M. D., Collaborator.

The Pike County Medical Society met May 2. The scientific part of the program was a free discussion by all of the members present on injuries to joints and their treatment. After the meeting an elaborate lunch was served.

The Hempstead Memorial Academy of Medicine met in regular monthly session in Carnegie Hall, Portsmouth, May 9, with President J. W. Fitch in the chair, S. P. Fetter acting as secretary pro tem.

A. L. Test gave a lecture upon "Differential Diagnosis of Pregnancy." The speaker directed the attention of the academy to the expediency of making some reasonable charge for the routine examination of urine during pregnancy.

H. A. Schirrmann followed with a paper on "Management of Pregnancy." Discussed by Drs. Williams, McKerrihan, Test, Robe, Berndt and others. Dr. Schirrmann closed the discussion advocating very particularly the routine examination of urine during pregnancy and suggested that charges be made when abnormal conditions are found.

The matter was also brought up as to the proper charge to be made by physician engaged to attend a confinement who arrives after second stage of labor, having then the third stage and after treatment to attend. Our local obstetric fee is \$15. The majority who spoke agreed upon \$10 as a judicious fee.

The meeting of the Muskingum County Medical Society on Tuesday evening, April

19, was rather a unique affair, it being a banquet tendered the society by Dr. J. T. Davis, Zanesville, one of our oldest practitioners. This was held at the Clarendon Hotel, Zanesville. Drs. Hunter Robb, and C. F. Hoover, Cleveland, were to have presented papers, but owing to the sad death of Mrs. Robb were unable to be present. Dr. J. H. J. Upham, Columbus, presented a very interesting paper on "Lumbar Puncture," and Dr. Frank Winders, Columbus, took up "The Practical Value of Blood Pressure Estimation" in a very thorough and complete manner. Both these papers were upon subjects about which the general practitioner should be better acquainted, as means to a more thorough diagnosis. Dr. Edward Cass sounded a note of warning in a paper against a bill before the present Legislature regulating the sale and price of cocaine and allied drugs. After the banquet the following resolutions were adopted:

WHEREAS, The Muskingum County Medical Society has heard of the deplorable accident that resulted in the death of the beloved wife and companion of one who was to have been our honored guest tonight, Dr. Hunter Robb;

Resolved, That this society, in banquet assembled bow our heads as a token of our grief and hereby extend to our honored brother our heartfelt sympathy in this his hour of great bereavement, and be it further

Resolved, That a copy of these resolutions be forwarded to Dr. Robb and also be spread upon the minutes of the Muskingum County Medical Society.

TENTH DISTRICT

FRED FLETCHER, M. D., Collaborator.

Regular meeting of the Columbus Academy of Medicine, April 23. The program follows: "Heart Symposium." (1) Presentation of cases. (2) X-ray diagnosis of heart lesions. (3) Prognosis and treatment of organic heart disease in children. (4) After the recognition of a heart lesion, what should be done in the way of treatment? Discussion: Drs. LeWald, J. F. Baldwin, C. F. Bowen, L. D. Moore, Morehouse, Winders, Van Fossen and McClure.

Drs. Scott and Upham demonstrated a number of cardiac and arterial specimens.

Meeting of Academy May 2. "The Medical Profession in Its Relation to the Coroner's Office," J. H. Hanes. Discussion: Drs. Goodman, J. F. Baldwin and S. B. Taylor.

"Common Disorders of the Stomach," J. M. Rector. Discussion: Drs. McGavran, J. D. Dunham and Goodman.

Meeting of Academy, May 9. "Gall Bladder

Symposium." (1) "The Diagnosis of Gall Stones," by G. M. Waters and F. F. Lawrence. (2) "The Treatment of Biliary Colic," by J. M. Rector. (3) "Have We a Satisfactory Treatment for Gall Stones?" by E. J. Wilson. (4) "The Surgical Treatment of Gallstones—a, Operative Indications; b, Surgical Results, and c, In What Percentage of the Cases Operated Upon do the Stones Recur?" by Drs. Means, Wardlow and Gilliam. General discussion: Drs. Baldwin, Hatton, Morehouse, McClure and H. H. Baldwin.

Meeting of Academy, May 23. "Obstetrical Symposium." (1) "Indications for the Use of Forceps," by J. L. Gordon, M. E. Blackburn, C. C. Ross and W. D. Inglis. (2) "Technique Forcep Delivery," by Drs. J. F. Baldwin, R. V. Combs and A. E. Evans. (3) "Technique of Breech Delivery," by Drs. Turner, Whitehead and Winters. General discussion: W. D. Murphy, Joseph Price, P. D. Shriner.

Meeting of Academy, May 16. "Epilepsy," by D. N. Kinsman. Discussion: Drs. Deuschle, G. H. Williams and Emerick.

"Nitrous-Oxid and Oxygen Anesthesia," by W. I. Jones. Discussion: R. C. Rice, C. A. Howell and R. Blee Smith.

NEWS NOTES

A NEW HOME FOR SCHERING & GLATZ.

Forty-three years of uninterrupted business in the same section of Maiden Lane, New York, have linked the name of Schering & Glatz intimately with that of the thoroughfare.

Owing to the constantly increasing demand for locations on upper Maiden Lane on the part of the wholesale jewelry and insurance interests, several pharmaceutical and chemical houses have in recent years moved from this erstwhile center of chemical industry.

Schering & Glatz will shortly follow their example, remaining, however, on Maiden Lane, a few blocks removed from their former locations. Their future home, the five-stories building at 150-152 Maiden Lane, southeast corner of Front street, is at present being thoroughly remodeled and will be ready for occupancy on July 1.

J. Edw. Pirrung has removed to 1218 Walnut street, between Twelfth and Thirteenth streets, Cincinnati.

Frank Jacobi announces his removal from 913 Madison avenue to the Colton building, corner Madison avenue and Erie street, Rooms 415-418.

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ORIGINAL ARTICLES

LABORATORY DIAGNOSIS—ITS IMPORTANCE TO THE PRACTITIONER.

FRANCIS CARTER WOOD, M. D.,

Professor of Clinical Pathology, College of Physicians and Surgeons, Columbia University;
Pathologist and Attending Physician, St. Luke's Hospital, New York.

[Read before the Ohio State Medical Association.]

As we near the end of the first decade of the new century, there is everywhere noticeable a most remarkable tendency in medicine to criticize, sift and otherwise take stock of our present knowledge; even concerning the value of our system of medical education there is much searching of hearts. There is a general feeling that we are approaching a new era in medicine, and an expectation that the twentieth century will see further great discoveries which will rival the magnificent achievements in surgery of our profession during the nineteenth century. Such an aura is not always followed by the expected results, but if the rate of progress of the past ten years is continued, the hope is certainly justifiable.

While the medicine of today is, theoretically at least, extraordinarily in advance of that of fifty years ago, yet there are men now in active practice in this state, the beginning of whose training dates back to that period, and we all, no doubt, gladly acknowledge that they are physicians of ability, that they diagnose and treat their patients' troubles successfully, and do as much as, if not in many cases more than the graduate of the past ten years. It is evident for this and many other reasons which need not be enumerated here, that much of our accumulated scientific knowledge of disease must be regarded as merely a preliminary basis for the future work of investigators in medicine, and that this century is to see the expansion, synthesis, and *practical application* of the scientific facts discovered, or about to be discovered, to the direct healing

of the sick. For this reason there is now a strong call for the laboratory investigator to turn from abstract problems and to concern himself with the immediate needs in hand: the cure of the sick. It certainly is in answer to this call that the great Rockefeller Institute and its hospital for medical research have been established in New York; that George Crocker gave his millions for the study of cancer; that the Phipps Institute for the study of tuberculosis is growing and extending its influence in Philadelphia; that money has been given to study the hookworm question and to check the ravages of the parasite; that the United States government through its admirable army and navy medical services is studying the diseases of the tropics in the Philippines and in Panama. It is because of their response to this call that Reed, Carroll and Lazear are honored in the history of American medicine, their lives sacrificed for the direct benefit of the human race.

It has occurred to me that the members of this section may be interested in some of the conclusions forced upon me by contact with this movement in medicine, a movement which threatens to put every physician into a laboratory and to make every laboratory man if possible a practicing physician; to fuse the methods of clinical observation with those of the microscope and test tube; to regard each phase as equally important in some cases, each as valueless in others. It is even beginning to place the treatment of a few of our patients in the hands of skilled laboratory men who alone are capable of handling some of the most potent and also the most dangerous of our therapeutic agents.

The so-called laboratory methods can be divided into two classes: one, those which every practitioner can and should employ; the other, those which by their very complication or their demands on skill, time and apparatus, necessitate the employment of a special worker with elaborate training. If we run over a few of the simpler tests which the practitioner himself may use, you will notice that they are not all the most recent. In fact, a good rule for such

methods is that which someone gave for books: Never read a book until it is at least a year old. For laboratory tests I think the time should be extended to at least five years. During that time the matter will be sifted and looked at from all sides, and a large series of observations will be collected, so that we can really and finally determine the practical value of any method. We have been deceived so often in the past that one is inclined to be skeptical when a new thing appears. Generally the mode of selection is by simply dropping a test. One hears less and less of some novelty, until finally it disappears from the standard textbooks and is heard of no more.

This change in attitude is very evident in the use we make of the examination of blood. When I entered the hospital as an interne, leucocyte counts were in vogue, and many weary hours we spent in looking through a microscope, enumerating the white corpuscles, no matter what the disease from which the patient was suffering. Today any medical student can tell you just how much and how little value the leucocyte count has. He knows, for example, that there is a group of rare diseases—the leukemias—in which the diagnosis can be accurately made only by the examination of the blood and the determination of the number and variety of the leucocytes. In such cases the man trained in laboratory methods must make the diagnosis. We all know also that in infection a large number of leucocytes indicates in general a good resistance, while a low count shows the reverse. But we also know that in pneumonia some patients recover with a very low count, while others die with a high one. We are aware that a high count often indicates pus; but we know that a low number of leucocytes by no means excludes an extensive abscess. We have in the past ten years discovered that the relative count of the white cells is in many cases more important than their total increase; that a high polynuclear percentage suggests an acute infection or hemorrhage, and that one over 95 per cent. is rarely seen except in pneumonia. But we also know that patients without an acute infection may occasionally show a high polynuclear count. In other words, the surgeon should not be called upon to open an abdomen solely on the number of leucocytes. Useful as these laboratory determinations may be, the patient's face, his pulse, his temperature, his physical condition, his history, must all be taken into consideration in making the diagnosis. The leucocytes are only one phase of the whole question.

Let me pause for a moment to cite a case in

point. A young man was brought into the hospital ward suffering from a high continuous fever, with great prostration. He had a slight bronchial cough, with no sputum. As he said that he had been sick only a few days, he was supposed to have typhoid fever, and was put on typhoid diet; and the laboratory was requested to make a routine blood examination, a Widal test, and a blood culture. The leucocytes were high, about 12,000, with a relatively high polynuclear count. The Widal test was negative, as was the blood culture. Inasmuch as in the early stages of typhoid fever, organisms can be isolated from the blood in about 98 per cent. of the cases by the use of proper methods, and as at that period of the disease a low leucocyte count and relatively high lymphocyte count are the rule, the laboratory sent back word that the case was not one of typhoid fever. The attending physician remarked to his staff that he was born long before the laboratory was heard of. The laboratory, somewhat irritated, I must confess, thereupon took up the study of the case, and found that the patient's ward history was not full; that he had been coughing and losing weight for two months. After considerable difficulty some sputum was obtained, which on examination showed enormous numbers of tubercle bacilli. The man at no time had typhoid fever, and he is now doing well under fresh air treatment for tuberculosis. Physical signs appeared at the right apex at about the same time that the bacilli were found in the sputum.

It seems to me that there is considerable material for meditation in a case of this type, which shows that one must be ready to appreciate the relative importance of the phenomena which we are studying and to remember the weight which should be given to each clinical symptom. In typhoid fever the blood culture and the Widal have a far higher value than mere prostration and fever as the following figures from Treupel will show, though these were compiled in 1905, a time when the technique of the isolation of bacteria from the blood was not as perfect as it is now. The proportionate diagnostic value of the symptoms in percentages, is:

	Per cent
1 Isolation of bacteria from blood.....	93
2 Widal reaction	91
3 Slow pulse in proportion to fever.....	87
4 Clinical history permitting diagnosis....	75
5 Diazo reaction in urine.....	74
6 Rose spots	72
7 Palpable spleen	57

In pneumonia, on the other hand, the most important thing in diagnosis is to hear evidences of consolidation in the lung.

To return to our subject: we know that certain changes in the red cells are indicative of a fatal anemia, the so-called pernicious type. We also know that a similar picture can be produced by a species of tapeworm, fortunately rare in this country. We also know that a blood condition very closely imitating pernicious anemia can be induced by repeated hemorrhages, especially from hemorrhoids and ulcers of the intestine. We know that certain types of anemia are accompanied by leucocytosis which aids in determining the nature of the disease. We know that other types are not, which again points a way for treatment.

The demonstration of the organisms of malaria in the blood is of more importance than any other symptoms of the disease. In all acute untreated cases the parasite can be demonstrated by a sufficiently careful search.

We have learned to examine urine with more intelligence than formerly; to separate temporary albuminurias and cylindrurias from nephritis. We know now that the diagnosis of eclampsia and Bright's disease is not made by the determination of urea in the urine. As a matter of fact, most of such determinations are not worth the paper they are written on. The freezing point and conductivity tests are no longer in general use. We know that the estimation of uric acid in the urine does not make a diagnosis of gout. Strange to say we are returning to the old thread test for uric acid in the blood, which Haig recommended fifty years ago. Glycosuria no longer of necessity means diabetes, nor acidosis approaching coma; and a yellow skin and conjunctiva are as important as a bile reaction in the urine.

We have learned that the stomach does not secrete a mathematically constant amount of hydrochloric acid or of ferments, also how much the emotions influence that secretion, and how useless are elaborate tests without taking nervous instability and the general conditions of the body into full account. A good deal of palpation and some inflation of the stomach may be worth much more than chemistry in individual cases. We have learned to simplify our tests and make them more accurate. We know how extremely important traces of blood in the feces are for the diagnosis of ulceration of new growth along the gastrointestinal tract. We have learned of how little value most of the other chemical tests on the feces are. The eggs of parasitic worms and the amebae of dysentery are the chief diagnostic findings from the side of morphology.

In the sputum, if we can demonstrate tubercle

bacilli and differentiate them from other organisms, we have almost covered the ground of practical diagnosis; gross inspection at the bedside will do the rest. The general practitioner is beginning to analyze milk and to study the effect of modifications of that important fluid in regulating the diet of children under his care without calling in the pediatricist.

Of bacteriological methods there are but two which the practitioner need constantly employ. These are the microscopical examination for the diphtheria bacilli, the tubercle bacillus, and the meningo—and gonococcus, and the agglutination test for typhoid fever. In the large cities, fortunately, the municipal laboratories will make any or all of these tests free of charge; but it is often important in private work or when one is at a distance from facilities to be able to make at least a good preparation and examine for these common organisms. It frequently enables the practitioner to save a patient from blindness from gonorrheal ophthalmia and enables him to decide upon the nature of a vaginal discharge in little girls, which we have gradually learned is most frequently gonorrheal. It may save twenty-four hours in the isolation and treatment of a case of diphtheria when time is most precious. The demonstration of the tubercle bacillus in the sputum may definitely save a life by permitting the necessary hygienic methods to be installed before the disease has involved a large portion of the lung.

The Widal reaction for agglutinins in the blood of persons suffering from typhoid fever is one of the borderland tests which it is difficult for the average practitioner to carry out unless he has a fairly good laboratory training, and I think it will ultimately be done entirely in central laboratories by specialists. The technical value of the Widal is at present settled. It is one of the most valuable symptoms in typhoid fever, appearing more often in the course of the first ten days than any other individual symptom, if we except bacteraemia and fever. On the other hand, it does not tell us that the disease is typhoid much before the end of the first or the beginning of the second week, and if the case is well marked a clinical diagnosis should be obtained before the Widal becomes sufficiently strong to enable a positive report to be given. In the obscure, irregular cases, however, of which we see so many, it is our most valuable diagnostic symptom, with the exception of blood cultures. If we leave out these two tests we still employ in the diagnosis of typhoid fever the methods of our fathers and grandfathers.

Blood cultures belong to the second group,

which the practitioner himself can not employ as a usual thing. Except in typhoid fever they do not as a rule afford a sufficiently early diagnosis to permit of beneficial therapeutic attack; and excluding this disease hardly 10 per cent. of cases of acute endocarditis or sepsis give positive results. When a patient has streptococci or staphylococci circulating in the blood, that patient is as a rule doomed, and as yet none of our remedies seem to be of much value. The colloidal metals wax and wane in popularity. Polyvalent streptococcus sera apparently work wonders in one case and do nothing in the next. The vaccines in generalized infections seem to do harm rather than good. Indeed, if there were any scientific basis for their application they would be contraindicated in a patient whose entire system is flooded with organisms. In judging the value of such remedies it is in these very cases that extreme caution must be exercised. I have never forgotten the lesson which we all received in New York some years ago from the report of a surgeon who claimed to have cured a case of streptococcus septicemia by the injection of formaldehyde into the veins. The patient did indeed have streptococci in the blood and did improve under the formaldehyde injections; but apparently this was only an accident, for of the many persons who received formaldehyde treatment afterward, but few survived. It was promptly shown by experiments that the injection of formaldehyde into the veins of animals suffering from bacteriemia hastened their death rather than otherwise. A single case, therefore, is absolutely of no value in judging of any therapeutic agent—a fact which can not be too frequently reiterated.

Concerning the newer reactions with sera or bacterial products we are still in the course of accumulating data to enable us to judge of their practical value. These tests form a transition between those which are purely practical and may be applied by the physician, and those which belong more especially to the laboratory, though the attitude is gaining ground that they should by no means be generally employed by any one who has not had thorough training in the methods of bacteriology. The old subcutaneous method of applying tuberculin carries with it possible danger and too much discomfort to the patient to be generally available, though its value in determining obscure tuberculous lesions in nonfebrile patients is unquestioned. I also venture to prophesy that the Calmette-Wolff-Eisner conjunctival reaction will soon fall into disuse, as there are already more than fifty cases now on record and many others not recorded in

which vision has been seriously damaged by the drug. If a physician tells his patient that one person in ten thousand loses his sight from the use of the Calmette test, the patient is apt to retort that he will wait and let the doctor make the diagnosis in some other way rather than submit to the danger. The same information can be obtained by the skin reactions without the attendant risk.

The von Pirquet tuberculin test suffers from the defect that a large proportion of adults react to it, and while we all know that almost every grown person has or has had a small tuberculous lesion, it does not help us in the diagnosis of the present case to have a reaction due solely to old lesions. What we want to know is whether a catarrhal bronchitis is tuberculous, or whether it is of a simple nature. We want to know whether there is an active process going on and not that there is an old partially healed lesion at the apex of one lung. The von Pirquet reaction, therefore, in its present state of development is of little value in diagnosis, except in the study of young children. Here it promises to be of great value especially as pointing the way to hygienic procedures to prevent the access of the tubercle bacillus to the lungs, while the child is unable to protect itself from the sputum of its parents or the milk of tuberculous cows. Von Pirquet's paper showing the great rise in percentage of tuberculous disease, less than 1 per cent. being due to bovine bacilli, from infancy upwards, is instructive as indicating how early tubercle bacilli enter the body, though his statistics are not true for America because of the extraordinary prevalence of tuberculosis in the Viennese population, with which he worked.

The Moro salve by which tuberculin is rubbed into the skin is less apt to give a positive response to small quiescent lesions than pure tuberculin, and seems to be, as far as present observations go, of much more value than the Pirquet. The same is true of Detre's method of inoculation with tuberculin, though it is doubtful whether the interpretation which he places upon slight differences in the type of reaction as he employs it will stand criticism. Certainly the Moro and Detre reactions are not as a rule given unless some active tuberculosis is present, though they are, as is well known, often absent in very active cases, such as those of miliary tuberculosis.

We will now turn to an entirely different group of tests, those in which the practitioner obtains only the results, the methods being too complicated and time-consuming to permit one who is in practice to carry them out. This

group contains a number of complicated and difficult procedures based upon the researches in immunity carried out by Metchnikoff, Bordet, Wright, and Wassermann, and many others. The opsonic index of Wright as a means of diagnosis is, it seems to me, rapidly losing ground in New York and elsewhere. In treatment also we are rather inclined to neglect the index as unreliable, and as extremely difficult and time-consuming to determine. Careful observations of the patient's general condition are usually quite sufficient to enable us to carry on treatment with tuberculin or the so-called vaccines or suspensions of dead bacteria. In New York there is a quite evident tendency to place the use of tuberculin therapeutically in the hands of a few special workers who have had a large experience in the employment of the drug, and the general practitioner is rather giving up the use of this most dangerous remedy.

The vaccine treatment, too, is being placed in the hands of specialists, chiefly men who have had long bacteriological training, and who understand how to make their initial cultures, how to sterilize the massive growths, and how to dilute them previous to inoculation, and what is equally important, the type of infection which ought to be benefited. I think that the indiscriminate use of so-called stock vaccines in the therapeutics of acute infections cannot be too strongly deprecated. We are injecting into the blood current particles which may form emboli or thrombi, and may give rise to the most serious constitutional disturbances by the toxins which they carry in their bodies or give off to the surrounding culture media. A number of examples of serious damage done to patients by the inoculation of large quantities of vaccine in unsuitable cases are now on record.

We can not be too cautious in judging from a few cases the value of some new methods of treatment. A friend of mine has related to me how he thought that he had obtained a new vaccine for pneumonia, and how the first thirty patients treated by the mixture survived, many of them running a short course apparently aborted by the inoculation. Thirty successfully treated cases of pneumonia in a mixed hospital material in New York is an extraordinary occurrence. But after the thirtieth case there came a similar run of fatal cases, in which the inoculation seemed to produce not the slightest effect, and the final outcome was that little or no benefit was obtained from the vaccine. The same thing was noted after the application of leucocyte extract by Hiss and Zinsser, where the results in pneumonia, while they at first seemed astonish-

ingly good, afterward indicated that the extract was of little use in the very cases which needed help; in other words, it was valueless in severe cases, and of use only in those cases which were likely to get well without much assistance.

We are perhaps a little careless in these busy days and do not obey the first principle of our profession: Not to hurt.

The diagnosis of rabies in the animal and the treatment of that disease in the human being has assumed considerable importance of late, owing to the ease with which the Negri bodies can be demonstrated in the brain substance of all animals or persons dying from this disease, and the therapeutics of the disease have been put upon a new basis. The demonstration of these organisms, however, is a matter of considerable difficulty and requires special training. The treatment also should be left in the hands of those members of the state and local boards of health who have had to do with the preparation of material for inoculation.

Another laboratory test which is becoming more importance to the physician, much more so to the surgeon, is the test for the hemolytic activities of the blood of persons who are to undergo transfusion. I can not insist too strongly upon the necessity for preliminary examination of the blood of the person who is to act as donor, to see whether hemolysis is produced, and I do not share the generally expressed opinion of the surgeon that as long as the patient is moribund, transfusion may as well be done, running the risk of a fatal hemolytic reaction. The physician often has to decide whether a patient is to be transfused or not, for they are not all surgical cases, and it is especially important that the type of anemia for which the transfusion is to be done should be carefully determined. An experience of my own has taught me to regard not only the hemolytic bodies, but also the agglutinative substances. In a recent transfusion in which very slight hemolysis and agglutination was observed, the patient died in a few hours from cerebral thrombosis due probably to the formation of agglutinative thrombi, while in the circulating blood were found large numbers of phagocytes evidently destroying the corpuscles which had been injected into the patient's circulation. The reason for this phenomenon was probably the peculiar qualities of the blood seen in type of anemia from which the patient was suffering. It should by this time be well known that the infusion of blood in true megaloblastic pernicious anemias rather hastens the inevitably fatal end, while in

the secondary anemias beneficial results may be expected.

I am not sure, however, that transfusion will be regarded as an important procedure in the future, for everything now points to the fact that the red corpuscles given by the healthy donor are to a certain extent foreign bodies, or at least useless particles to the recipient. The chief thing he gains from the corpuscles is a stimulation of his bone marrow. If that blood-producing organ is beyond any stimulus, no result is obtained. The patient, in fact, has extra labor in getting rid of the residue of the corpuscles. On the other hand, the injection of fresh serum from the rabbit or horse seems to work extraordinarily well in certain types of purpura and progressive hemorrhage. You all know that in many of these cases the coagulation time of the blood is absolutely within normal limits, and that calcium lactate and other drugs have no effect. The injection of 10 to 20 c. c. of rabbit serum under the skin will often check such a hemorrhage, especially in the new-born. I have been interested in watching the babies at the Sloane Maternity Hospital improve under this simple procedure. The same method has been of benefit in postpartum hemorrhage, and I doubt if the dangerous and difficult operation of direct transfusion will long survive.

When, in 1905, that brilliant young zoologist Fritz Schaudinn saw under the microscope the *Spirochaete pallida* in the fresh serum from a chancre, the study of syphilis entered upon a new era, for the diagnosis of the disease has been greatly aided by the fairly easy demonstration of this parasite in primary and early secondary lesions under suitable conditions. We will not argue here whether the *Sp. pallida* is the causative agent in syphilis or not. We know that it is constantly found in that disease in man and animals, it may be in symbiosis with some invisible organism; but for the present the finding of this little corkscrew parasite in the serum from an ulcer is sufficient evidence to warrant beginning treatment.

I said fairly easy, because I think the demonstration of *Sp. pallida* is exceedingly difficult, merely because of the minuteness of the parasite. It is now perfectly possible to stain it in the course of a few minutes by any one of half a dozen stains. One of the simplest and best of these methods is that which I published some years ago as a stain for the malarial parasite.¹ Thin smears of the serum squeezed from the lesion to be examined are fixed for three minutes in methyl alcohol, and flooded with a 1 to

10,000 aqueous solution of eosin w. g. (Grübler), using about 0.5 c. c. of the eosin stain on the smear. A 1 to 400 aqueous solution of methylene azure blue 1 (Grübler) is dropped directly on the slide and mixed with the eosin, using about the same quantity as of the other dye. The proportions seem to be relatively unimportant. It is essential only to get an excess of the blue. A few trials will show how many drops should be used. This mixture is left on the slide for six to eight minutes and is then washed off with a strong stream of tap water; the slide is dried and examined with an oil immersion. The *Sp. pallida* is stained a deep red, as are the nuclei of the leucocytes. The bacteria and other spirochaetes usually assume a bluish tone, which is a great advantage in distinguishing between *Sp. dentium* and *Sp. pallida*.

The parasite may also be found with the microscope arranged for dark-field illumination. This is not very easy unless one is trained in the examination of syphilitic material, for I have frequently astonished my laboratory assistants by demonstrating what is apparently *Sp. pallida* in scrapings of the teeth from perfectly normal individuals. This *Sp. dentium*, which occurs in all our mouths, resembles very closely the specific spirochete, except that it is shorter and has fewer and shallower turns to the spiral. Of course, in the serum from a secondary lesion of the skin or from a chancre, no such confusion is apt to occur, but in secondary lesions from the throat great care must be exercised in making a diagnosis.

The easiest method of all is the ink method of Burri. The spirochaetes can be easily demonstrated in the exudate by mixing with it a little India ink of fine quality (Bourgeois or Gunther Wagner is the best), and allowing the preparation to dry in a thin film. The spirochaetes are sharply outlined and can usually be identified without difficulty, if they have a sufficient number of turns to distinguish them from the *Sp. dentium*. Very short specimens of *pallida*, however, can not be sharply separated from *dentium* by this procedure.

At almost the same time as the discovery of the organism came the announcement that Wassermann had discovered complement fixation in the serum of syphilitics. This is perhaps the most important of all the laboratory tests which have been devised in the past ten years. Originally worked out by Bordet and Gengou as a purely biological phenomenon, Wassermann and his pupils applied it to the diagnosis of syphilis. They were pleased beyond measure to find that apparently the reaction was specific. Shortly

¹Medical News, 1903, lxxxiii, 248.

after, when a general study of the subject had been begun in the various laboratories of Europe, it was pointed out that fatty or lipoidal substances were those which played the part of the syphilitic immune body. Subsequently it was shown that the blood giving this reaction had no immunizing power in animals. In other words, this is not an immune body at all, but a chemical substance produced in the tissues and found in excessive quantities in the circulating blood of persons suffering from syphilis. Thus, an experiment which apparently had ample scientific foundation and which was successful, was afterwards found to be based upon entirely erroneous conclusions, and, therefore, the only method of determining its final value was to collect a large series of observations showing the incidence of the positive reaction in syphilitics and in absence in healthy people.

It is now four years since Wassermann, Neisser and Bruck carried out their first experiments on syphilitic apes and obtained this so-called reaction complement fixation. This is not the place to go into the details of this test. It is the most difficult, most complicated, and most puzzling of laboratory procedures, and no one can do it accurately without long training. The recently published monographs of Bruck in Germany and of Noguchi in America render any detailed description here unnecessary. Some twenty thousand cases are now recorded which show that positive results are practically never obtained in normal human beings, and only in syphilitic or parasyphilitic conditions. For example, in Bruck's study of 5028 control tests only fifty-nine were positive, and if certain doubtful cases are thrown out, the rate falls to less than one in a thousand. While the reaction may occur occasionally in leprosy, or very rarely in carcinoma, and possibly in scarlet fever and certain protozoal infections, yet as the technique has improved the number of these conflicting reactions has decreased, and many of them are undoubtedly due to imperfect technique.

We now know that in the early stages of the disease, we get a moderate number of positive reactions, depending of course upon the extension of the disease. We know that practically all cases with secondary lesions give a positive reaction if they have not been treated. We know that many of the late cases give reactions and that the ones which do not are the ones which have undergone thorough treatment. We know that practically all cases of general paresis give the reaction, and that about 50 per cent. of cases of tabes give it. Evidently, tabes is not so

absolutely dependent upon syphilis as has been thought.

The chief difficulty in interpreting the results is the fact that treatment inhibits the reaction, and we have not as yet sufficiently extensive statistics to enable us to say just how much treatment may check the reaction, or what time must elapse between the treatment and the reappearance of a positive test. This question must be cleared up in the near future in order to permit us to obtain the greatest benefits from the test. A case will illustrate: I examined a middle aged man who gave a negative reaction. He had a hard obscure thickening of the cord, and epididymitis, with a large hydrocele. On tapping the hydrocele there still remained a firm tumor. The surgeon who had sent him to me thought that the negative reaction must mean carcinoma. On investigating the patient's history, I found that he had had a small amount of treatment a few months before. This had consisted merely of a few tablets of mercurous and potassium iodide. A vigorous course of antisymphilitic treatment did not affect the local condition and an operation was considered advisable. At the time of operation I made a microscopic examination of a section. The hydrocele sac was immensely thickened and inflamed and from a fragment I was able to make a positive diagnosis of syphilis. The surgeon felt that considering the patient's age, the fact that he did not respond to treatment, and the possibility of a new growth, he had better remove the affected testicle. On incision of the testis it was found to be entirely occupied by a gummatous mass. The absence of a reaction after slight treatment, therefore, does not necessarily prove the absence of a syphilitic taint.

The following case illustrates another phase: A small specimen, which had been removed from the pharynx of a patient in one of our large hospitals, was sent to me. I reported it as epithelioma. The clinician retorted that the case was evidently syphilis from a clinical point of view, and that I must be mistaken in my diagnosis. I asked him whether thorough antisymphilitic treatment had been applied, and he said that it had, and volunteered the information that the Wassermann reaction was also negative. This, however, was made light of because, the clinician said, the effect of treatment was to nullify the test, and that it really was therefore of no value at all. I retired as gracefully as possible, and afterwards saw the patient in a moribund condition from extension of the new growth from the pharynx into the lymph nodes

of the neck, showing that the growth had been an epithelioma all the time.

It is also very dangerous to tell a patient, on the basis of a blood examination, that he has not syphilis. People are constantly applying to the laboratory, having heard of the new test, and are asking to have it done. They often will not state whether they have had treatment or not. Under such circumstances a negative reaction is not of the slightest value; in fact, it is often misleading. On the other hand, a negative reaction in an untreated case may save people from much worry and it is especially of advantage in quieting some of the syphilophobes who fill our cities owing to the indiscriminate spread of imperfect knowledge through the current press and by some of our well meaning physicians. I recently had a man and his wife apply to me for a Wassermann. Neither had any suspicion of syphilis, but some physician had made a diagnosis of syphilis on the wife. She knew enough to accuse her husband, and the situation was unpleasant. As neither had had any treatment a negative reaction from both was a great comfort to the family.

The immense value of the public health and life insurance side of the question is evident. In Dresden, for example, in the Nurslings' Hospital it was found that 10 per cent. of the wet nurses gave a positive reaction, and that three-fourths of the children who had been nursed by these women gave evidences of syphilis. The time will probably come, therefore, when no wet nurse will be allowed to fulfill her most important function without a clean bill of health as far as the Wassermann reaction goes. The regulation of women of the street will also be much easier when we have a positively means of determining whether they are syphilitic or not. I do not doubt that life insurance companies will soon demand a Wassermann test, at least for their selected low rate cases. This has already been suggested in Germany, and when we think of how important a factor syphilis is in the causation of diseases, such as aneurism, aortic regurgitation, arteriosclerosis and cerebral hemorrhages, we can see that the life insurance companies would do well to make special rates for those who give a positive reaction. Of course, here, the knowledge that treatment will inhibit the reaction, which will soon be widespread, will prevent full use of the method.

It has been necessary to give merely a superficial sketch of the many technical methods which the practitioner may employ. A full discussion of any one of these would have occupied my hour. My reason for this form of presentation

was a feeling that the members of the society would gain more benefit from hearing one whose work in medicine has been largely confined to the laboratory procedures express the plain truth in regard to these methods and point out that they do not solve more than a few of the questions which face the physician when he is called upon to make a diagnosis. We must never forget that the most of medicine is still in the trained eye and the skillful fingers, in the eliciting of an accurate history and the balancing of the facts so obtained. I do not doubt that in 90 per cent of the cases which the physician sees in his practice, the diagnosis may be very well made without the application of any but the simplest tests, such as the hemoglobin blood test, and the albumin and sugar test in the urine. But the practitioner who is not interested in laboratory work should be trained to note such cases as are beyond his diagnostic ability, and if he is to be honest with his patients they must be sent to some one with such training. The practitioner who attempts to treat cases of diabetes without a fairly full knowledge of his patients' metabolic peculiarities, is wronging those patients. There is a large group of cases of disorders of the stomach and intestine which need the information which a test meal can afford despite history and careful physical examination. It is rarely possible to make a diagnosis of carcinoma of the stomach in time to enable the surgeon to be of any benefit to his patient, without some of these special methods. Here lies the advantage of the men who have made a special study of such conditions, and while I fully realize some of the disadvantages of specialism, yet I believe in it most firmly.

The question arises, however, how is a busy practitioner to obtain the benefits of laboratory knowledge. It is manifestly impossible for a man who spends twelve or fourteen hours of his day in seeing patients to keep in training or to read up on special methods. He is too tired when his regular work is over, or he may never have had the opportunity to get the necessary preliminary scientific training. It has seemed to me that the only ways in which the practitioner can obtain accurate and satisfactory reports from laboratory tests is, not to attempt to do them himself, but either to adopt the old preceptor system, using a graduate in medicine instead of an undergraduate, or to arrange with several of his colleagues to support some recent graduate who will devote himself for a few years to running a small laboratory. Under the first scheme the younger man would have the benefit of the physician's long experience and could get a train-

ing comparable to that given by the hospitals to post-graduates. This method is being used by many of my confrères in the East, who arrange with promising young men that they shall do all of the laboratory tests on private patients and either share the fees or get a regular salary. The scheme of a central laboratory is perhaps more economical, because one man can then do the laboratory work of six or eight practitioners. If a reasonable guarantee is offered to such a man he can fit himself by taking a course on the more difficult tests, such as the Wassermann. It is perfectly possible for a man to make a good living if sufficient practitioners support him with their laboratory work, and the success of a number of my old students in this field is an evidence of its practicability.

Even if the physician may not be blamed if he is indifferent to laboratory methods from the point of view of diagnosis, he can not with impunity treat those suffering from bacterial diseases without definite knowledge of the infective organism, so that all the newer antitoxic methods, such as those employed for the meningococcus, and the vaccine methods introduced by Wright, require an absolutely accurate identification of the inciting organism, before injection of the patient with these most powerful and dangerous drugs. It is never difficult to convince the patient of the need of these tests in order to get him to pay for the very best information, and I think that in the future the general medical practice of this country will be improved only by a closer union between the laboratory man and the practitioner in one of the two ways which I have outlined. The time has passed when any one individual can cover the entire subject of general medicine.

"If during the last quarter of a century I have prescribed almost no alcohol in the treatment of disease, it is because I have found very little reason for its use, and it seemed to me that my patients got on better without it."—Sir James Barr, Dean of the Medical School of Liverpool University.

"With the increase of medical knowledge and with the increase of medical observation, it is shown every year that the value of alcohol as a drug has been enormously over-estimated. It is a very poor agent, and only in common use because it so easily obtained. The medical profession is using it less and less, because they appreciate it now at its true value. Personally, I never order it, because I believe patients recover better without it."—Sir Victor Horsley, Surgeon to London Hospital.

A FURTHER CONSIDERATION OF CHRONIC PANCREATITIS.

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[Read before the Ohio State Medical Association.]

In this further consideration of chronic pancreatitis the subject will be viewed only from its surgical aspects, no reference being made to those cases of pancreatitis occurring in connection with cirrhosis of the liver, arteriosclerosis, syphilis, or other strictly medical conditions.

Chronic pancreatitis presents two distinct pathological and clinical pictures, the interlobular and the interacinar, depending upon the location of the fibrosis, which is the essential pathological process of the disease. In the interlobular form of pancreatitis, which is the only one of surgical interest, the pathological changes are, at first, confined to the supporting framework of the lobules; the affected portion of the gland, owing to the marked increase in connective tissue, becomes enlarged and indurated; the lobules thus become more prominent and more distinctly outlined; to the touch the gland is lobulated, hard and unyielding. Later in the course of the disease, the periphery of the lobules become involved in the fibrosis which, slowly extending inward, may eventually involve the islands of Langerhans and produce a diabetes. This form of pancreatitis is practically always the result of infection, either through obstruction and infection of the pancreatic ducts, or by lymphatic transmission from the gall-bladder. These etiological conditions are surgical in their nature and, together with the resulting pancreatitis, are amenable to surgical treatment instituted at any time prior to the occurrence of crippling lesions of the biliary structures or extensive involvement of the islands of Langerhans.

As was contended in my paper of a year ago, in the great majority of instances the diagnosis of chronic pancreatitis is not difficult if all the methods of examination now available are employed. However, in order that the less severe and consequently less evident cases be not overlooked, it is necessary that the possibility of this disease being present must be kept well in mind when making both the anamnestic and physical examinations of all patients presenting symptoms of chronic disease in the upper abdomen. The anamnesis alone frequently points so directly and unmistakably to a chronic pancreatitis that the corroborative evidence derived from the physical, chemical and microscopical examinations is nec-

essary only for the purpose of making the case record scientifically accurate.

In other less pronounced cases, the anamnesis being confused by the presence of causal, concurrent or correlated conditions, all symptoms must be investigated judiciously and given their due weight both individually and collectively, while it may be necessary practically to exhaust every method of examination at our disposal before a diagnosis can be reached. While some of these methods, notably the examination of the feces and Cammidge's pancreatic reaction, are technically somewhat difficult and time consuming, the confirmatory findings resulting therefrom possess a value sufficiently great to recompense one well for both the labor and time.

In my further experience, Cammidge's pancreatic reaction has continued to prove a valuable and thoroughly reliable indication of the existence of pancreatic inflammation. In every instance, save one, in which a pancreatitis has been found on operation this reaction had been positive and, on the other hand, in every case giving a positive reaction, which has come to operation, the presence of pancreatitis has been shown by the gross pathological condition of the gland. Further than this, in more than one case in which the existence of latent gallstones was suspected, only because of the presence of certain slight stomach symptoms, and in which there were no apparent symptoms of pancreatitis, Cammidge's pancreatic reaction has been positive and thus has been the determining factor, not alone in the diagnosis of pancreatitis, but of galltract disease as well.

As practically 80 per cent. of the cases of chronic pancreatitis occur as terminal and sequential events in gallstone disease, the relations between the common bile duct and the head of the pancreas, and between the common and the pancreatic ducts, as well as the methods of termination of these ducts in the duodenum, becomes of more than passing importance.

The determination of an interlobular pancreatitis in many instances depends upon either an infection, or an obstruction and infection, of the pancreatic duct, and it would seem that the obstruction to the duct is the antecedent phenomenon which so generally renders infection an efficient etiological agent. The normal rapidity and force of the outflow in the pancreatic duct ordinarily would appear to be sufficient to prevent infection by continuity either from the bile tract or the duodenum. When, however, a gallstone becomes impacted in a common duct running through the head of the pancreas in close contiguity to the pancreatic duct, it so may im-

pinge upon the latter as to cause either a decided slowing in the outcurrent, with accumulation in the ducts, or a distinct obstruction with complete damming up of the fluid within the pancreas.

A gallstone lodged in the diverticulum of Vater inevitably will interrupt, if not arrest, the outflow of pancreatic fluid. If the gallstone is not sufficiently large completely to fill the diverticulum, under a certain rather rare combination of circumstances bile may be retrojected into the pancreas in sufficient quantity to cause an acute pancreatitis, as in the unique case reported by Opie. When the impacted gallstone is sufficiently large completely to occlude the diverticulum it produces a simultaneous obstruction of both the biliary and pancreatic ducts.

In those instances in which the pancreatic duct empties into the common duct some distance above the opening of the latter into the duodenum, a gallstone lodged in such a common canal not only will obstruct both the biliary and pancreatic channels, but also allow bile to become mixed with the pent up pancreatic secretions.

Lymphoid hyperplasia of the terminal portion of the common bile duct, lying within the wall of the intestine, as described by Eppinger, with partial or complete obstruction of the common duct at its very outlet, will explain in many instances the concurrent or sequential occurrence of gastroduodenitis, cholangitis and pancreatitis. In those cases in which the common duct and the duct of Wirsung effect a junction before opening into the intestine, obstruction at the intestinal opening by this hyperplastic lymphoid tissue must result in obstruction and distention not only of the bile duct, but also of the pancreatic duct.

Obstruction of the pancreatic duct from any cause necessarily is followed by stasis of fluid within the pancreas and by distention of the excretory duct even to its minutest ramifications. This distention of the duct walls interferes with their blood supply, lowers their vitality and renders them less resistant to bacterial infection.

There would appear to be sufficient and satisfactory evidence to show that infection of the pancreatic structures frequently, if not generally, is an ascending infection from either the biliary tract or the duodenum. However, this path by continuity of structure is not the only avenue by which infection may travel from the biliary tract to the pancreas, as it has been shown beyond contention that infection is carried from the gall bladder to the pancreas by the efferent lymph-

atics of the former which terminate in a group of ganglia about the head of the latter.

I wish to emphasize the opinion advanced last year that many of the cases of chronic pancreatitis supposed to follow and to depend etiologically upon a duodenal catarrh, or gastro-duodenitis, are in fact due to an infection of the gall bladder provoked by the presence of latent gallstones. That gallstone disease is but seldom recognized save when attended by biliary colic, jaundice and putty-covered stools, all of which are terminal rather than initial events of gallstone history, is anything but a credit to our surgical teaching.

It is freely granted that there are but few diseased conditions in the recognition of which the necessity for a minute and exhaustive history is so imperative as in that of latent gallstones. Frequently the characteristic symptoms are so slight, and make so little lasting impression on the patient, that only after most exhaustive and persistent questioning is it possible to elicit a history which is sufficiently exact and positive to warrant one in basing a diagnosis thereon.

On the other hand, in all too many instances, so distressing are the symptoms, so careless is their interpretation, and so ineffectual their medical treatment, that the long-suffering and unrelieved patients pass successively from physicians to charlatans, to hydropathic sanatoria and to patent medicines.

The symptoms of latent gallstones are of mild intensity, and, almost without exception, referred to the stomach. They are the symptoms usually recognized as indicating the functional disturbances of indigestion, dyspepsia and gastralgia and those of gastroduodenitis. It is not necessary at this time to again give a detailed enumeration of these mild but distinct and diagnostic symptoms. The recognition and correct interpretation of them, however, establishing the diagnosis of the causal disease within the biliary tract, frequently will be of decided value in arriving at the diagnosis of the secondary pancreatic inflammation.

Of the symptoms directly attributable to the pancreatic disease itself, the subjective digestive disturbances generally are overshadowed by those of the associated gall tract disease and are too indefinite to be of diagnostic value. The valuable symptoms resulting from faulty digestion are found in the altered condition of the feces. The evacuations are frequent, soft, bulky and pale, and because of their frequency are often erroneously described by the patient as diarrhoeic. The frequency of the evacuations is due to their increased bulk, which is caused by incomplete digestion, especially of albuminous

foods. The normal pigmentation of the feces being due to the presence of an insoluble pigment resulting from the action of the pancreatic juice upon some of the coloring matters of the bile, it follows necessarily that absence from the bowel of either pancreatic juice or bile will result in unpigmented feces.

A microscopical examination of the feces frequently will show the presence of an unusual and marked quantity of undigested muscle fibres, which while a valuable symptom of pancreatic inflammation, more strongly is suggestive of malignant disease. Fat in the feces is a more valuable symptom of pancreatitis than is the presence of muscle fibres. Occasionally the feces are visibly greasy, but ordinarily a chemical examination will be necessary to determine positively not alone the presence of fat, but as well, the form in which it exists.

Stercobilin, normally present in the feces, is diminished considerably in quantity in pancreatitis, and absent or showing but the slightest trace, in cancer of the pancreas. Cammidge's test will give a positive reaction in practically all the cases of pancreatitis and in about 25 per cent. of the cases of cancer of the pancreas, owing to a zone of pancreatic inflammation surrounding the malignant area. The absence of stercobilin in the feces, with a positive Cammidge reaction, is strongly indicative of cancer.

Loss in weight, frequently referred to as a striking symptom in gallstone disease, far more often is the result of the digestive inefficiency and metabolic disturbances accompanying a pancreatitis secondary to the cholelithiasis. Occurring in connection with the symptoms of gallstones, it should be considered as a marked indication of a complicating pancreatitis.

Jaundice in the course of a pancreatitis may be of either biliary or pancreatic origin. The latter, far more frequent than the former, generally results from compression of the common duct as it courses through the head of the pancreas, such compression being due to the enlargement of cancer or the swelling of inflammation. Jaundice when of biliary origin, from impaction of a stone in the common duct, is characterized by an ebb and flow in the intensity of the skin pigmentation; when from compression of the duct in chronic pancreatitis, by a more nearly fixed intensity of the discoloration; when from cancer of the pancreas, by a steadily increasing pigmentation eventually assuming a much darker green tinge than in benign disease.

The occurrence of hemorrhage, following slight trauma or inconsequential disease, occasionally is a striking feature in pancreatic le-

sions, and is due to the marked urinary elimination of the lime salts of the blood resulting therefrom. A recent case had repeated hemorrhages into the skin, especially over the buttocks and between the shoulders, giving the appearance of severe contusions. Other patients have stated that even the slightest bruising of the skin would be followed by most decided discoloration. Several of my patients have given a history of profuse and prolonged menstrual periods occurring subsequent to other symptoms marking the onset of a pancreatitis. A number of instances of severe, and even fatal, hemorrhages from various abdominal structures apart from the pancreas are a matter of record. That these hemorrhages are due to the blood changes resulting from pancreatitis, and not to jaundice, is proven substantially by the fact of their occurrence in the absence of jaundice, and by the further fact that jaundice of biliary origin, in the absence of pancreatitis, is not accompanied by such decided hemorrhagic tendencies.

Pain and tenderness, while generally present, are most variable in their intensity and, in some instances, may be absent entirely. Frequently it is impossible to determine whether these symptoms are caused by a pancreatitis or by the associated gallstone disease. Several of my patients when asked to point out the seat of pain, accurately have outlined the location of the pancreas from the concavity of the duodenum to the spleen. The fact that the pain of gastric ulcer may assume this same location and direction must not be ignored.

Tenderness is elicited by pressure over the head of the pancreas, from one inch to two inches above the umbilicus and to the right of the median line. A slight rigidity of the rectus muscle more often is appreciable than is a distinct swelling in the head of the pancreas, although this swelling can be outlined in some instances.

The treatment of chronic pancreatitis is so simple, so safe and so satisfactory, that it would seem inexcusable to allow any case of the interlobular form of the disease to progressively involve the entire secreting parenchyma of the lobules and culminate in an incurable pancreatic diabetes. When gallstones are present they should be removed by such operative measure as may best be adapted to the individual case. Drainage of the biliary tract is the essential element in the cure of the pancreatitis and must be continued over a period sufficiently long to assure a disappearance of the biliary infection. In mild cases, when the disease has been of short duration, when the symptoms have been slight, when

the head of the pancreas moderately is swollen, nodular and indurated, and when gallstones are present, temporary drainage is indicated. When the pancreatitis has been of long duration and of marked intensity, when the head of the gland is decidedly swollen, nodular and indurated, and when no gallstones are present in any part of the gall tract, permanent biliary drainage will be necessary. In the borderline cases whenever there is the least question as to the probable efficacy of temporary drainage, the assured efficiency of permanent drainage should determine its employment.

PREMATURE BALDNESS—ALOPECIA SEBORRHOICA, PITYROIDES, OR FURFURACEA—ITS SYMPTOMATIC AND RATIONAL TREATMENT.

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[Read before the Ohio State Medical Association.]

Premature baldness is a subject which engrosses the attention of both the general practitioner and specialist. Although the contributions on the subject have been exceedingly numerous, and varied in character, most of the points regarding its etiology and successful treatment are almost as obscure at the present day as at the time when the earliest reports of careful and painstaking investigations were first given forth. In other words, relatively little scientific progress has been made regarding the true nature and successful management of this important branch of dermatology. Text-books and dermatologic literature in general offer little information which will aid the specialist or a general practitioner in reaching a correct interpretation of the underlying causes in a given case and in administering rational symptomatic, other than purely empirical treatment. The average contribution from journal or text-book presents the etiology and treatment from so many angles that it is almost impossible to reach a conception clear enough to encourage the proper management of these cases. The novice is promptly lost in a sea of therapy, into which a host of bacteriacid and empirical remedies have been emptied for the reason that the list of favorably reputed remedies is very large and embraces a category of numerous and composite formulæ. This paper is contributed with the hope of classifying some of the disputed and ob-

scure points regarding the etiology of premature baldness and of placing the treatment upon a simple, more rational and symptomatic basis.

CLASSIFICATION.

According to Jessner, who has contributed an interesting and instructive volume on the cause and treatment of baldness, the latter is conveniently divided into five general classes, namely:

I. Alopecia (a) Adnata, or congenital baldness, characterized by hair diffusely thin, or thin in patches and often delicate or lanugo-like in character. It is often attended by other congenital abnormalities such as thin, dry, scaly skin and scalp, imperfect teeth and nails. (b) Senilis, or the steady and progressive loss of hair which attends advancing age and as a part of the general atrophy of all structures, is in a measure a normal and almost physiological process. (c) Prematura, which will be the subject of special consideration in this paper.

II. Alopecia seborrhoica, or loss of hair which is attended with a marked oily or greasy condition of the hair and scalp. The writer is of the opinion that this alopecia presents merely a slight clinical variation and should be properly embraced with the class of premature baldness.

III. Alopecia mycotia, or baldness due to such parasitic affections as ring-worm, favus, etc.

IV. Alopecia areata, or the well known self-limited affection characterized by the complete disappearance of the hair from round uninfamed patches.

V. Alopecia symptomatica, or baldness secondarily due to such intercurrent affections as syphilis, trauma, lupus vulgaris and erythematosis, erysipelas, smallpox, the wasting and infectious diseases, etc. In order to simplify matters, the writer will endeavor to concentrate as far as circumstances permit, the attention of the paper upon premature baldness, including in this category, as already indicated, the class of alopecia seborrhoica.

ETIOLOGY.

The etiology of premature baldness is a matter of not only scientific interest but of the greatest practical importance. Up to the present time little definite, concrete knowledge has been advanced upon the subject. It will be more than useless to consider all the various possible causes which have thus far been advanced, such as light, dust, heat, hat bands, "rats," water, etc., etc., for this affection; suffice it to say that any or all these causes will not produce baldness in every given case, and no case of baldness can be well attributed to any or even all of these causes. The question whether premature baldness is or is not

of a parasitic character, merits first consideration. This question received early consideration at the hands of Lassar and Bishop as early as 1882, who were convinced of its parasitic nature by experiments upon guinea pigs and rabbits. These investigators observed that when the bodies of these animals were rubbed with vaseline containing particles of hair and scales, obtained from patients afflicted with premature baldness, that the hair promptly disappeared from the inoculated areas, loosened so that it could be readily pulled out with the fingers and attached itself freely to the cages in which the animals were confined. Upon the basis of these experiments Lassar advanced a bacteriacidal therapy containing sublimate and naphthol, which has formed the basis of most of the therapeutic measures of the present day. The work of Lassar and Bishop was subsequently completely negated by Saalfeld in a long line of carefully controlled and conducted experiments upon white mice, guinea pigs and rabbits, and the parasitic nature of the affection discredited. Saalfeld's view received prompt concurrence at the hands of Kaposi, Brocq, Besnier and Doyon, Gruenfeld, Spietschka, Paschkis, Michelson and numerous others. Saalfeld discredited the parasitic nature in spite of the fact that he found micro-organisms, some of them probably identical with the micro-bacillus of Sabouraud and the "flaschen bacillus" of Unna; it is also needless to add that the theory of the infectious character of seborrhoea, advanced by the two latter investigators, has never received general credence. It is not a clinical probability that premature baldness is a parasitic affection; if it were, owing to its wide-spread character and convenient method of dissemination, barber shops and public combs and brushes, etc., no one could well escape infection. If premature baldness therefore, is not the result of infection, the cause must be sought in some other direction, for there must be etiological factors in this affection as well as in all other pathological conditions. Heredity is a generally conceded, and without doubt a strongly predisposing factor in many cases. Its influence can be properly regarded as presenile in character, inasmuch as of itself, without other influences, it probably accelerates the changes which characterize senile baldness. Some individuals doubtless inherit a tendency to grow prematurely old, as others to remain immaturally young, and the tendency to baldness on the one hand and "hirsuties adnata capitis" on the other, should be no exception to the general rule. Heredity of itself will fail to explain the cause and will be found to be entirely wanting in the vast majority of cases. Too much personal attention to the scalp, in the

form of over-shampooing, massage, unnecessary combing and brushing, galvanism, faradism, the too frequent applications of patent and proprietary nostrums and illy prescribed tonics, are probably the chief predisposing factors. This is the age into which most of these measures have been newly introduced, and as a result, it is fast becoming the age of premature baldheaded men and women. It is the opulent and better situated class of individuals, who indulge themselves in most of these superfluous attentions and it is among this same class that baldness is most manifest. In my visits to barber shops, it is a source of personal amusement to observe that men who are prematurely thin-haired or bald, seek a large degree of special attention in the form of scalp massage, shampooing, etc., whereas the relatively fewer number of early middle-aged men, with well covered scalps, discourage every form of similar attention. It is equally interesting to visit the wards of public hospitals and similar institutions, and observe the relatively larger number of well preserved scalps of men and women of the lower classes. The observation can be extended with equal results to the larger class of street and common mill-laborers, and as a rule, the dirtier, more unkempt and unclean the individual, the more abundant and luxurious is the growth of scalp-hair. This corresponds with the frequent observation that semi and uncivilized races, preserve (under favorable climatological conditions) excellent scalp-hair. The relative larger percentage and increasing frequency of baldness in the better classes, is noteworthy in private practice when compared with out-door clinical work. In the ten years from 1900 to 1910 it has increased in my personal experience from 3 to 10 per cent of all dermatological cases, and totaled during that period, over 800 cases, whereas in dispensary and hospital practice the percentage for the same period of time was infinitesimal and the number of cases scarcely totaled twenty in number. It is also noteworthy that the women who are afflicted with premature baldness, and the number is apparently large and progressively increasing, are largely from the opulent classes who have received a great share of personal attention at the hands of women hair dressers, at their shops or in their itineraries from home to home. Their attentions are very similar to those which men are accustomed to receive in barber shops and consist of weekly, sometimes twice weekly shampooing, massage, faradism, galvanism and the application of various patent proprietary and secret preparations. A history of over-attention of this character of considerable duration could be elicited in almost every case of premature

baldness, and I am strongly convinced that the predisposing, if not the direct causes of the condition emanate from such factors. Not every case of premature baldness, however, is necessarily caused by such over-attention, nor does it follow that such over-attention will necessarily produce baldness. Baldness is often symptomatic and frequently attends various local scalp affections, or is a sequel of many of the wasting and infectious diseases. Under these circumstances it is of transient character and disappears with the improvement of the general or local condition. The loss of hair under these circumstances, is attributed to such local influences as inflammation, pressure atrophy, etc., or to general malnutrition, toxemia, etc. It is therefore, probable that similar influences may occasionally effect premature baldness. That toxicity may be an important factor is evident from the interesting observations which have attended the internal administration of thallium acetate; this preparation, recommended a few years ago for phthisis, was observed to be followed promptly by baldness. Jeanselme in 1898 reported a case of complete baldness which promptly ensued after $4\frac{1}{2}$ grs. was administered within a period of three days, and which persisted for many months. Additional cases were reported by Giovannini, and successful experiments on mice, rabbits and guinea pigs were carried on by Bettman, Buschke and Vignolo Lutati. (On the basis of those clinical observations and animal experiments, the writer a few years ago, endeavored to overcome the distressing disfigurement of superfluous hair by local applications and injections of this remedy to the affected areas, but with negative results.) Eczema in all its forms and phases may involve the scalp, as well as other portions of the body—and often in mild, scarcely recognizable form. Its presence can be attended with loss of hair. The writer is firmly of the opinion that many obscure forms of eczema owe their origin to auto-intoxication from dietary errors and faulty digestion, and he is therefore of the opinion that these same causes can, in a measure, predispose baldness. A carefully regulated diet, the correction of faulty digestion, the administration of general tonics, etc., are important considerations in the successful management of premature baldness.

SYMPTOMATOLOGY.

The symptomatology of premature baldness, in spite of its obscure and indefinite mention in journal contributions and text-book references, is clear-cut and easily recognizable. Its prompt, careful and painstaking recognition is the keynote to diagnosis, prognosis and successful treat-

ment. Premature baldness possesses four cardinal symptoms: (1) loss of hair, (2) dandruff, (3) itching, and (4) a dry or oily condition of the scalp. Every progressive case of premature baldness is attended by some of these symptoms and the mildness or severity and favorable or unfavorable character of the cases depends in a measure upon the number of these symptoms that are present and their respective degree of severity. The general progress of the cases is measured by their improvement or lack of improvement. Each of these symptoms possesses its special indication for treatment, and the successful management of the case, is commensurate with the degree of success which attends pure symptomatic treatment. Successful treatment of premature baldness, entails therefore, an early and careful recognition of the above four cardinal symptoms, and their proper management when present.

LOSS OF HAIR.

Loss of hair is a fairly constant symptom in all cases and as an indicator of favorable or unfavorable progress, is one of the most important points of consideration. It may be considerable or inconsiderable in degree. This can be determined in two ways; the patient's personal observation and statement as gleaned from the number and amount of hair with each combing and brushing; or better, by gentle traction of the physician's fingers loosely passed through the patient's hair. The estimated loss should be carefully recorded for future reference. The careful, intelligent estimation and record of the daily loss is of the greatest importance in the successful treatment of premature baldness. It is one of the most reliable and important guides to success or failure for the attending physician, and to hope or disheartenment to the patient. It is usually the last of the cardinal symptoms to manifest itself, and as an end result, both patient and physician should realize that it is usually the last to correct itself. In other words, early and prompt improvement must not be awaited in most cases in this special direction, and patient should be early instructed not to expect a complete arrest of this symptom until several months of treatment have intervened. The loss of a few hairs with each combing is almost physiologically normal. Vigorous shampooing mechanically removes all of the loose hairs, so that loss of hair is not perceptible thereafter for a few days, and it may not be apparent to patient and physician if shampooing is oft and frequently repeated. Shampooing disguises for the time being, all the cardinal symptoms, and should be practiced after, rather than before, scalp examinations. Loss of hair is unduly predisposed by mechanical manipulation in

almost every form; notably by over-frequent or unnecessary combing and brushing of the hair, shampooing, massage, etc. The ill, rather than good effect of over mechanical manipulation of the hair can be exemplified by a comparison of hair with its embryological and in a measure, histological analogue, the tooth. A firm, healthy tooth, if persistently manipulated, will soon loosen and fall from its socket. A loose, but otherwise normal tooth will soon set firmly in place if left undisturbed. This aphorism of the teeth applies with even greater propriety to the delicate and more easily disturbed hair. Loose and falling hair should be disturbed as little as circumstances readily permit, and a hair "rest cure" is always indicated in such cases.

DANDRUFF.

Dandruff consists of loosened scales from the top-most stratified layer of the epidermis of the scalp. It may be exceeding fine, moderately coarse, or large and shred-like. It is more easily observed if the scalp is unusually dry, and is easily obscured by oils, glycerine, vaseline, etc. It is not so easily observed in very oily scalps, and under such conditions, it partakes the character of a soft, greasy deposit. It is therefore more commonly observed upon unusually dry scalps, when it can be readily seen resting free upon the surface, between the hair, or upon the shoulders when the latter are covered with dark clothing. Dandruff is the analogue of the scales upon the free surface of the body, incident to nearly every inflammatory condition of the skin, more than mere erythematous in nature. Dandruff therefore is the indication of some preceding or intercurrent inflammatory condition of the scalp. It is a fairly constant, and for the most part an early, cardinal symptom of premature baldness. It is an indicator of the extent, duration and intensity of associated inflammation and, inasmuch as its prompt and complete control is an important step in successful treatment, an attempt should never made to disguise its presence. Vigorous brushing and combing of the scalp (not the hair), and the local application to the scalp of irritants and strong antiseptics, predispose dandruff; the local use of irritants and strong antiseptics predispose dandruff; the local use of irritants and strong antiseptics is frequently followed by large shred desquamation. A careful record of the presence or absence of dandruff, in varying degree, is essential.

ITCHING.

Itching is a symptom fairly constant in most of the cases of premature baldness. It is usually not very intense, and escapes the notice of the patient unless the attention is especially directed to its

presence. It usually manifests itself for a few brief moments once or twice in twenty-four to forty-eight hours; it may, however, be entirely absent, or persist with annoying constancy. It is due to the irritation of the terminal nerve filaments of the scalp, by the associated inflammation in the same manner that those of the skin are in eczema and dermatitis in general. Itching is an indication of an unfavorable change in the degree and intensity of the inflammation, and the scratching and mechanical irritation which it elicits is almost invariably followed by an inordinate loss of hair. It is a symptom therefore that merits prompt attention and efficient control.

DRY OR OILY CONDITION OF THE HAIR.

A normal scalp is neither excessively dry or excessively oily, and any variation from the normal is promptly indicated by the absence or excessive presence of free oil. Palpation performed not earlier than two weeks after shampooing offers the most convenient and accurate method for such examination; the tip of the examining finger, when rubbed lightly over the surface of the scalp for a few seconds, is covered with a thin coating of oil, scarcely perceptible to the eye, or to the touch of the thumb of the same hand, in the normal. It is completely absent when the scalp is extremely dry, and excessively present when the scalp is too oily. In the latter case, a greasy reflex is apparent to the eye, and the examining finger feels greasy and slippery when rubbed with the thumb of the same hand. When the scalp is excessively oily the proximal extremities of the hair are dark and shiny to the eye; they fall out readily, and the imbedded ends are coated with loose greasy scales. A dry scalp is a much more favorable condition to contend with than an oily one, and offers a much better prognosis. A dry scalp as a rule, can be readily converted into an oily one, but it is very difficult at times to render an oily scalp dry. The facility with which alopecia with dry scalp or "alopecia pityroides," can be converted into alopecia with an oily condition of the scalp or "alopecia seborrhoica," and at times vice versa, leads the writer to regard the two as clinical variations of the same affection and not separate types as maintained by Jessner, et al. The excessive oil is doubtless predisposed by local irritating and stimulating measures. One of the most common and constant in my experience, is excessive shampooing and particularly with patent, proprietary and medicated soaps. These patients invariably gain the impression that frequent shampooing is essential because of the excessive greasy and oily condition of the scalp; they have the "cart before the horse"; the scalp is greasy because of the frequent shampooing.

Resorcin, an important constituent of many patent and proprietary preparations, strongly predisposes seborrhoea. It is very important to keep under careful observation, whether or not the scalp is dry or oily, and this delicate "weather-vane" in successful treatment should not, under ordinary circumstances, be disguised by the application of oils, ointments, pomades, vaseline on the one hand or by orris-root powder, etc., on the other.

TREATMENT.

The successful treatment of premature baldness embraces preventive, general and local measures. Prophylactic or preventive treatment entails the careful consideration and elimination of all possible etiological factors in any given case. Patients should be instructed to discourage all forms of personal over-attention to the scalp, except those specifically prescribed. Massage, over-shampooing, excessive and unnecessary brushing of the hair, brushing and dry rubbing of the scalp, galvanism, faradism, etc., must be interdicted. The hair and scalp should be given a "rest cure" from attentions of this character. The scalp should be shampooed as infrequently as hygienic requirements and the comfort and personal appearance of the patient demand. Spraying and washing the scalp freely with plain water which is sufficient in itself to remove all the loose dirt and dust from the scalp and to keep it normally clean, may be indulged daily if the patient so desires with only good and no untoward effects. It will not, however, give to the hair the muchly desired light, fluffy appearance, which is imparted by shampooing with soap and water. The scalp should not be shampooed more often than once in three or four weeks, and best scarcely in that many months. Tincture saponis viridis (Cin. Alk. Tab. Co.) prepared from pure olive oil, is a well tolerated shampoo which permits of thorough rinsing and is well adapted for this purpose. The general treatment entails a wholesome nutritious diet, free from grave indiscretions, the correction of any error of digestion, constipation, and, if specially indicated, the internal administration of general tonics. The local treatment must in a measure, be symptomatic, in conformity with the cardinal symptoms already enumerated. The writer will not attempt to give a detailed description of the treatment for any group of cases, but one irrespective of special features, as formulated from an experience covering a goodly number of years and hundreds of cases. The two remedies which have served best in a general way, have been resorcin and chloral, and these remedies, which in the proportion of five to fifty parts of each respectively to one thousand parts of water,

formed the base for the successful treatment of the vast majority of cases. The following formula has been a stock solution for the fundamental treatment of all cases:

Resorcin	5.0
Chloral hydrate	50.0
Aq. dest.	1000.0

This solution has been diluted or intensified by the addition of certain specified ingredients to meet the special indications and requirements of each given case. Resorcin or chloral allay itching and dandruff, fairly promptly in the vast majority of cases, and if otherwise well tolerated, they gradually control the loss of hair. They stimulate, however, a flow of oil, and discolor hair that is light or gray, a greenish yellow; therefore when the hair is light or when the scalp is slightly oily, they must be used well diluted and with utmost caution. It is good practice to begin in all cases with a dilution of one part of the above solution to two or three parts of water, and if well tolerated with good and no untoward effects, the concentration can be gradually increased until full strength is reached. During the early stages of treatment the patient should be observed at intervals of two weeks until the case is brought under satisfactory control. The applications should be made daily for a week or ten days until there is marked improvement when it should be applied every other day and gradually less often until eventually used but once or twice weekly. Should the scalp become dry, the loss of hair more pronounced, the remedy is promptly diluted with five to ten parts of water. Every effort should be directed toward correcting the oily condition of the scalp and, if need be, one gramme of tartaric acid and ten drops of acetic acid should be added to 250 grammes of the well diluted solution to accomplish the desired effect. If the seborrhoea is still persistent, the resorcin and chloral should be entirely eliminated, and a preparation prescribed containing one gramme each of tartaric and tannic acid, one gramme of colloidal sulphur, and ten drops of acetic acid to 250 of water. Should this remedy fail in its purpose, which, however seldom happens, the application of nascent sulphur, after the method of Radcliffe Crocker (p. 1424, 1905) gradually effects the desired result.

M. Lotion No. 1.	
Hyposulphite of soda.....	12.0
Aq. dest.	240.0
M. Lotion No. 2.	
Ac. tartaric	6.0
Ac. tannic	0.2
Aq. dest.	240.0

Apply first No. 1 and follow immediately with No. 2.

With every change of formula, the new remedy should be applied daily for a few days until some improvement is manifest, after which it should be applied less frequently in accordance with the control exercised over the special symptoms. The elimination of resorcin and chloral, whenever necessary, retards in a measure, the otherwise more rapid and satisfactory progress of the case. Itching, which is usually promptly controlled by the application of resorcin and chloral, can be more efficiently checked by the addition of 1.0 of colloidal sulphur, or 4.0 of liquor carbonis detergens, or both, to 250.0 of the resorcin-chloral solution. Both of these remedies possess a slight odor, which is occasionally objectionable to some patients; the liquor carbonis detergens is probably the more objectionable of the two, and in addition, renders the hair slightly stiff and somewhat pasty in character. The dandruff, if not excessive, is almost invariably controlled by the resorcin and chloral. If it is inclined to persist, the addition of one gramme of colloidal sulphur, gradually effects the desired change. When dandruff is excessively and persistently present, an error of diagnosis is probably the case; instead of premature baldness, we are probably dealing with a case of seborrhoic eczema or common eczema, or some other form of scalp affection, conditions that are outside the special scope of this paper. Loss of hair, as already stated, is usually the last symptom to correct itself. It occasionally improves with unusual promptness, but as a rule, requires some little time to correct itself. The arrest of hair loss must justly and properly be considered the ultimate goal of our therapeutic efforts; it must be borne in mind that it can only be reached through elimination of the three intermediary but no less equally important cardinal symptoms, namely, dry or oily scalp, itching and dandruff, which have blazed a pathologic way for the alopecia in premature baldness.

CONCLUSIONS.

Animal experimentation and clinical experience reveal that premature baldness is not a specific infection. Heredity exercises at most, a predisposing influence. It occurs chiefly in the opulent individuals who indulge in such over-attention as frequent and unnecessary shampooing, combing and brushing, massage and faradism, etc. It is an infrequent condition in the indigent poor and unkempt. It predominates greatly in private over dispensary practice. It is doubtless somewhat predisposed by causes which impair the general condition of the patient. It possesses a symptomatology consisting of four well-defined symptoms, namely, dandruff, excessively dry or exces-

sively oily conditions of the scalp, itching and loss of hair. Treatment to be successful must be prophylactic, general and local in character. Local treatment should be symptomatic and carefully controlled to meet the special indications of the various manifest symptoms.

APPENDIX.

The author has found it almost imperative to preserve a careful and well condensed record of the cases as regards symptoms and treatment. This should be condensed in such a way to impart at a glance all the important changes in a given case, briefly covering, if necessary, numerous visits over a considerable period of time. To properly effect this, he has used the following symbols for symptoms: "A" for alopecia, "Se" for seborrhoea, "Pi" for pityroides or dandruff, and "Pr" for pruitus or itching. When any of these symptoms were absent and when there was no loss of hair, a zero mark was affixed thus, A° in alopecia; when slight in character by one or two marks, thus A"; when moderate by three or four such marks, A''', and when excessive, by a correspondingly larger number, thus A'''''. The remedies were likewise symbolized; thus, R. C. 1-3, indicated the resorcin chloral stock solution diluted with three times its amount of water. R. C. 1—3+S. 1.0, the same solution to which one gramme of colloidal sulphur has been added. The record of a case would read somewhat as follows:

February 12, 1910. A'''' Pi''' Se' Pr''' R. C.
+1—3.
February 26, 1910. A''' Pi' Se'' Pr' R. C.
1—3+S. 1.0.
March 12, 1910. A' Pi° Se° Pr° R. C.
1—2+S. 1.0.

The interpretation would mean that on February 12 the case presented moderate loss of hair, dandruff, itching and a slight oily condition of the scalp, for which a resorcin chloral solution diluted three times with water, was prescribed. On the occasion of the second visit, February 26, all the symptoms improved except the oily condition of the scalp; to correct this 1.0 of colloidal sulphur was added to the solution as previously prescribed. On March 12, dandruff, itching, and oil had entirely disappeared, and loss of hair improved and the preparation was diluted with only two parts of water. Such a symbolical record can be easily elaborated to cover all special indications, and will be found to be of inestimable service in exercising a complete, careful and intelligent control of the cases.

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DISCUSSION.

Charles J. Shepard, Columbus: I was hoping Dr. Heidingsfeld had found a specific for baldheads. As he says, the causes are so numerous, the results are not good. We get more baldheads in men than we do in women. I think it is our duty to educate the people in regard to the care of the scalp. We can accomplish more by this method than by treating after the hair has gone. If we instruct them not to use the patent hair tonics, not to wear rats, etc., instruct them in regard to brushing the hair, giving it air, sunshine, clipping, etc., we will obtain much better results. I don't believe washing is injurious. The scalp should be kept clean just as well as any other part of the body. Wash the scalp as often as necessary. Think it is up to us to educate the people, and in that way baldheads will be rare, not educate after it has started, but start during infancy.

E. D. Tucker, Toledo: I heartily agree with Dr. Heidingsfeld regarding the help one might get from the text-books is not very much. I think, that the best results one can obtain is by personal observation; also the personal equation. An article appeared some time ago by Dr. Parker, of Detroit, in regard to his terror of premature baldness. There seems to be a great tendency among the laity to overtreat the hair. They are very solicitous to carry out all suggestions in regard to treating of the hair.

J. E. Tuckerman, Cleveland: I was very much pleased in one particular, and that was the confusion that has arisen from the discussion of the two conditions, "Oily" and "Dry." The question has been discussed pro and con as to what effect the number of clippings has on the hair. Would like to ask what effect this has?

Walter Irwin LeFevre, Cleveland: It seems that all agree that the patient treats the hair too much. When we tell him to quit doing everything he will say that the doctor does not know anything. We must do something. We certainly must wash the scalp, but not so often with soap, eggs, etc. It is these agents that cause the trouble.

Dr. Varney, Detroit: The doctor has certainly given us a very interesting general topic for our consideration. I am glad to hear him on preventive treatment. I hope to hear him on "hair return."

I feel that the dermatologist who is in active

teaching is handicapped if he has a good growth. He uses his own condition for material. Causes of alopecia are complex. No one particular cause present in any large number of cases. It takes a long time to disturb a nail, and also to disturb a hair bulb. Therefore, cannot determine the cause in a large percentage of cases because they go to the quacks before you determine the cause.

Referring to the doctor's symptoms of the disease: The falling of the hair. Before you get real falling of the hair you get changes in the shaft. You will notice the hair is of large, coarse shaft; it will get a little finer and then you get a little falling. There are changes going on that precede the falling of the hair, that is to my mind starvation, lack of resistance on the part of the scalp due to starvation. You first get atrophy of the scalp, and then atrophy of the subcutaneous tissue, and contraction, causing a lack of blood supply, which produces a condition of starvation.

We also note a growing finer of the shaft. We find these shafts taper, showing a starved condition. This is one very important cause.

In regard to the treatment. In my mind I feel that local applications is only valuable in caring for the secondary conditions which appear upon the atrophied scalp. Therefore, if we have a shutting off of the nourishment, we should increase this by treatment such as deep massage. I believe this will do more than anything we know of; but all we can get from local applications is stimulation of the circulation, so that it is a round about way of applying local treatment. One other agent we can all avail ourselves of is the sun. Sun baths take care of seborrheum. The custom of going barehead stimulates the growth of hair. In outlining treatment, don't forget the sun. I have been under the care of the best dermatologists here and abroad, and I have carried out their treatment faithfully and have failed.

Dr. Ravogli, Cincinnati: I think the author should be highly complimented for the scientific way in which he has prepared this subject. Will only point to rubbing as a cause of baldness. The Jewish women when they had eyebrows that came together, they would place a piece of flannel over the glabella, and as a result of the rubbing of the flannel the hair would disappear. You will notice the lack of hair on horses where the harness rubs. Hat wearing is a frequent cause.

Dr. Nelson, Cincinnati: The Orthodox Jews wear the hat constantly, and I find that there is just as little baldness among the Jews as any other class of people.

Dr. Heidingsfeld (closing): I want to thank you gentlemen for the kindly discussion you have given my paper. I agree with Dr. Shepard that we should educate the laity properly. It is permissible to wash frequently with water, but soap and other agents should be used only occasionally. Soap is irritating to the scalp. In regard to nutrition, such as Dr. Varney has indicated, I don't believe that local nutrition plays very much part in this condition. I think the scalp is supplied well enough with blood vessels to do away with massage. I made no claim for a specific. I don't believe we will ever have one on account of the variety of causes, and all we can expect is to control the symptoms as they present themselves.

DIAGNOSIS AND TREATMENT OF EARLY PULMONARY TUBERCULOSIS.

J. P. DE WITT, M. D.
Canton.

[Read before the Ohio State Medical Association.]

The symptoms of tuberculosis in its incipency are as different from those of advanced tuberculosis as the treatment in the early stage differs from the treatment in an advanced stage. It is my wish to discuss this subject at the stage wherein we eliminate all the commoner symptoms of the disease and exclude all those well known methods of treatment.

It is impossible for a physician, like myself, who is engaged in the general practice of medicine, to contribute to a scientific body an address which will be appreciated by men who are devoting their time to the scientific work of the tuberculosis problem. I can speak to you merely from a practical standpoint and generally from my personal experience in dealing with these patients.

The diagnosis of tuberculosis in its very early stage means a cure in at least 50 per cent. of the cases, while a diagnosis in the late stage means misery to the patient, but probably safety for his environment. Out of this great army of consumptives presenting themselves for a diagnosis, the percentage on whom an early diagnosis can be made is very low, when compared with the percentage of advanced cases. But the near future will surely reverse this state of affairs. The fact that our present method of treatment will accomplish a cure in 90 to 95 per cent. of the cases, if applied early, should stimulate all medical men to devote enough energy to this subject so that they can be competent to make an early diagnosis.

The appearance of tubercle bacilli in the sputum indicates a breaking down of the lung tissue, and when this occurs these patients are in an advanced stage of the disease. We must not depend upon finding bacilli in the sputum, and I do not consider this procedure in arriving at an early diagnosis. The sputum should be examined wherever you suspect tuberculosis if the patient is expectorating. "Cough" is not an important sign in early tuberculosis and often does not appear until the disease is well advanced.

A history of frequent colds, "run down," dyspepsia, easily fatigued after slight exertion, slight loss of weight, nervous and irritable, perhaps a light hemorrhage which has been diagnosed as coming from the throat or teeth, slight hoarseness, anemia, neurasthenia in girls, are all symptoms

that should be sufficient to cause suspicion of tuberculosis.

A careful study of the temperature will probably reveal a subnormal morning temperature with a slight rise in the afternoon, and the patient usually declaring that he never has any fever. A thorough physical examination will not reveal information which will cause us to make a diagnosis in all cases. Inspection, palpation and percussion are of little if any value in early cases, and we must get our information through auscultation.

We must constantly keep in mind that tuberculosis is the most frequently met with disease amongst our patients applying for examination, yet it requires usually but one glance at these patients to cause us to suspect that they have tuberculosis. Auscultation is the key to an early diagnosis in tuberculosis, but, strange to say, all physicians do not gain the same information from auscultation of the chest. I have never been able to hear, or imagine that I heard all the different sounds distinguished by professors of physical diagnosis. I depend entirely upon gaining most of my information from auscultation by hearing rough breath sounds—usually at the apex. If the disease be more advanced either cog-wheel or harsh respiration or puerile breathing will be present. It is not necessary to have rales present in order to arrive at a diagnosis, yet forced breathing followed by coughing at the termination of inspiration usually produces the fine crackling variety. We do not know the exact cause of rough breathing; neither do we know what phenomena produce normal vesicular breathing. Having satisfied ourselves that the vesicular murmur is abnormal, after securing the above history, we should then proceed to the use of tuberculin to prove our diagnosis.

In the use of tuberculin as a diagnostic agent, we obtain our knowledge from what is known as a reaction, and this is due to a special sensitiveness of the tissues to tuberculin acquired after a tuberculous infection. A healthy person will not react to large doses of tuberculin. In the early stage of tuberculosis the reactions are more certain. The clinical value of the reaction depends upon the smallness of the dose and the quickness and degree of response. The reaction is local or general. Close observation will often reveal a local reaction without a general reaction occurring. I have observed the local reaction in the larynx more frequently than I believed it to occur—since using Hay's pharyngoscope as a routine.

The subcutaneous injection of Koch's old tuberculin is the most reliable of all the tuberculin tests. We usually employ the inunction of tuber-

culin ointment of Moro or the cutaneous test introduced by von Pirquet first; then if reactions have not occurred by the use of these tests, the old tuberculin is injected subcutaneously. The patient should be observed previous to the injections as well as afterward. If no reaction occurs, after gradually increasing the dose of Koch's old tuberculin from one-tenth to ten milligrams, I feel quite certain that this patient has not early tuberculosis. The conjunctival or ophthalmic tuberculin test has not been satisfactory in my hands, and I do not use it as often as I did a year ago.

The treatment of tuberculosis is a large subject and can be discussed today in a very informal way. My chief aim in presenting this subject is to stimulate the general practitioner to diagnose his cases early and treat them at home. The surgeons have taught us to diagnose and treat our own cases of appendicitis at home, with the result that fewer patients now die of the disease because we operate earlier. The same law will prove more satisfactory in tuberculosis. It is the most curable of all other serious diseases—if treated early, and the most fatal—if allowed to advance. Out of the great number of cases infected, only about twenty per cent of them die of their tuberculosis. The eighty per cent recovered because the lesions were small or the infection was of a low virulence.

Physicians engaged in a department store business of medicine are unable to furnish statistics which will be of much value. The literature on this subject is so illuminating that I feel for me to make quotations to you will be asking your indulgence against your will. The contemplation of giving you my results in the treatment of tuberculosis is sad; but the great majority of you are general practitioners, like myself, and you may profit by my mistakes. I realize that it is impossible for men in large cities, where their patients come from all classes of society, to secure the results obtained by myself, located as I am in a small city, where my patients are selected, have their own homes, and can follow out any plan of treatment advised, and are willing to accept an early diagnosis. In some instances patients do not improve so well at home as in a sanitarium, but the end results of ideal home treatment are superior and in closed cases far greater than those of a sanitarium.

The statement is cruel but true—that very few patients in a limited financial condition ever recover from well developed tuberculosis. I have seen them improve, but, being compelled to return to work, the disease progresses. In fact, an observation of those patients—supposed to have been cured by a short term of rest and forced

feeding—will show that many relapse. It is the experience of nearly all physicians to have patients whom they had dismissed a few years before as arrested return relapsed or reinfected.

The more you study the results of treatment in open cases, or those with broken down tissues, the more pessimistic you must become as to curing these cases with fresh air and forced feeding. I have been using tuberculin in the treatment of my cases of tuberculosis for the last twelve years. During the earlier part of this time I was quite skeptical as to any benefits they may have received from its use. The loss of confidence in tuberculin has been due to lack of comprehension of its action in producing immunity.

The immunization theory is today a problem for the future to determine, and it makes very little difference to the busy physician or the anxious patient whether the immunity is anti-bacterial or anti-toxic if he can but establish a resistance to the tubercle bacillus. The cure of tuberculosis is synonymous with the cure of all other diseases of bacterial origin; no matter what methods of treatment are employed, when a cure results, it is due to the infected organism establishing an immunity to the tubercle bacillus. The immunity may be temporary or permanent, but is always present when a patient recovers from tuberculosis.

It is beyond the scope of this paper to discuss the theories of immunity, or its methods of production, except to make comparison of the results which I have obtained by establishing immunity by rest, forced feeding and fresh air with the immunity established by rest, forced feeding and fresh air plus tuberculin.

The general practitioner cannot estimate the amount of immunity produced in his patients by a study of the anti-toxins, anti-endotoxins, lysins, agglutinins, precipitins, opsonins and other products; neither can he estimate the dosage of tuberculin by determining the agglutinating power, the amboceptor, or the opsonic index of his patient's blood. The dosage is at present empirical—each individual must be carefully observed and treated in accordance with his clinical symptoms. Absolute control and careful consideration of all clinical symptoms, following the preceding injection of tuberculin, will give as good a guide for the administration, and the results obtained will be equal to those where the opsonic index was the guide.

The mode of action of tuberculin in producing a cure in tuberculosis is not fully known. Koch, Trudeau and Wright, each has different views as to its action. Laboratory experiments show that it increases the specific immunizing substances found in the blood, such as agglutinins

and opsonins. Clinical experience warrants us in believing that the disease shows less tendency to spread to new tissue, and that the tubercles show a greater tendency to heal; also that relapses are not so frequent. Locally hyperaemia of the diseased portion of the lung is produced.

Reactions are considered dangerous by some observers; others believe that they are harmless, and in some instances beneficial. I have never observed any harmful results from reactions but have seen marked improvement follow where previously the patient was not doing well. A careful clinician will have few reactions if he will begin with small doses and gradually increase.

All patients with a fever of 100 degrees or over are ordered to bed until the temperature is normal. Tuberculin is not used until the patient has learned how to rest, eat and secure fresh air, which will require several weeks. By this time his temperature will be normal. It has always been my aim to have the patient free or nearly free from fever before beginning the use of tuberculin. During the last two years, however, I have been employing it in advanced or open cases running a temperature of 101 to 102 degrees. Experience in these cases indicates that it assists in the reduction of temperature and the absorption or elimination of toxins.

If all cases were diagnosed and treated early there should be very few deaths. I have not had a death occur during the last twelve years in patients where a reasonably early diagnosis was made and the patient was immunized with tuberculin. During this experience I have had at all times from ten to fifty patients under my observation. Those patients immunized with tuberculin did not develop complications of the larynx, glands or bowels, and very few relapses were noted. Patients apparently cured or arrested without tuberculin frequently relapse and develop complications. The bacilli, which had disappeared from the sputum, can again be found after some slight illness. Return of the bacilli proves that the patient is not cured.

Many of my patients who were apparently cured years ago by rest, food and fresh air, have relapsed. Many of them reacted to tuberculin and have since been immunized. My patients given specific treatment, plus hygienic treatment, have maintained their immunity to the tubercle bacillus and its toxin.

DISCUSSION.

C. B. Conwell, Mt. Vernon: There can be no question about the necessity for the early diagnosis of tuberculosis; the method of such diag-

nosis depends upon the physician, correctness being the essential feature.

No hard and fast rule can be made which will govern all cases; one man may obtain more satisfactory results from a thorough physical examination, with personal and family history, aided by individual experience; another by the use of tuberculin in some form, and a third by a wise combination of both. Probably the third man would be more accurate for the incipient stage, but there must always be considered the question of danger. There can be no evil result from a thorough physical examination, and this, if properly made by a competent physician, should be sufficient to form an opinion. There is always a certain number of cases which may react badly to tuberculin (hypodermatically) or, in fact, any subcutaneous medication. Having this in mind, a physician should always, in my opinion, endeavor to make a diagnosis with the least possible danger or discomfort to his patient. If, after a thorough examination, there is still some doubt, a physician should, with the consent of the patient, use a tuberculin with which he is most familiar.

The aim in treatment of incipient tuberculosis is to make a cure or cause an arrest, this being accomplished by fresh air, rest, good food and proper condition of mind. The question of patients below the average or unfortunate in other ways is one of sociology more than of medicine. When a community properly provides for such of its members and compels the observation of hygienic laws, the problem of tuberculosis will hardly exist.

In regard to immunization by hygienic methods or by the administration of tuberculin, I have always held that all things being equal, the safety of the patient is the first consideration. I remember one case of a young lady who came to my office partner with tuberculosis, somewhat further advanced than incipient. She was advised as to her condition, was intelligent and thoroughly appreciated the instructions, which were rest, food, air, etc. At the end of two months the patient had greatly improved. She lived twelve miles back from the river in Kentucky, and had to ride or drive nine miles to the car line. This she did about once a week in all sorts of weather. From a friend, the young lady learned of tuberculin, and she insisted that the physician use it; so upon her own responsibility a supply was obtained from a reputable house, was given properly, and the patient watched as closely as possible. There was no change in six or eight weeks, the patient doing very well in all ways. Then she went to a party in a closed buggy, was caught in a rainstorm coming back, and the next day acute pleurisy developed, followed by effusion, cough with profuse expectoration, a number of hemorrhages, with rapid decline and death within two weeks.

Again, I have at present a patient in the sanitarium, who spent two months in a Southern institution. He is very intelligent and deeply interested in his condition. Tuberculin was injected regularly, much to his discomfort, and he positively says that each treatment aggravated his cough noticeably. Since leaving the sanitarium one month ago, the cough has ceased except in early morning. I will be very glad to hear your

opinion upon this question, and thank you for this opportunity.

R. P. Daniells, Toledo: I think Dr. DeWitt has explained himself on the use of tuberculin exceedingly well. The different companies that have put it out have put out a certain dilution, and you use so much of it so many times until you have finished the number of dilutions the company has put out, and I am perfectly sure it is an exceedingly dangerous thing and has hurried many people to their death. It makes it apparently easy to give. I am asked, "Do you believe in tuberculin?" and I say, "Yes; it is valuable"; and they say, "I gave it, and the first patient did nicely, then had a chill, and I think the tuberculin killed him." It is because the tuberculin is not given carefully. It is because the person giving it does not understand how it is being given and why, and does not watch the patient. It is one of our most valuable aids in the treatment of tuberculosis, and I do not discount fresh air and feeding. I have seen so much of it given 'happy-go-lucky,' causing trouble.

Another point in the early diagnosis, besides all the helps the doctor has spoken of, is the X-ray or skiagraph, by which we can learn many things absolutely impossible to learn in any other way. The sounds we hear and elicit are those of the active lesion, and I think it just as profitable to know of the healed lesions.

A woman, married, at the age of twenty-five, had her first pregnancy and nursed the child. She ran down and her friends said when she stopped nursing she would pick up. Two years later there was a repetition of the same thing, and her friends said the baby was taking too much strength. Three years later she had the third, and expected to run down and pick up as before; but she did not pick up, and finally developed a little cough, and at that time I saw her and could make a diagnosis of pulmonary tuberculosis, not far advanced. Then we had the help of the skiagraph, and it was very interesting. It showed not only the lesion which was active, but in the lower part of one of the lobes, as round and definite as this (illustrating at board) was a calcified area, and we know it must have taken a number of years to make a spot as plain as that. Around this lesion was another little halo, looking like the rings around Saturn, a little calcified, but not much; and outside of that, an active lesion, mottled and showing where the lesion was active. You can see that with a properly taken skiagraph. Probably the first occurred when she had the first baby, the second when the second child was born, and the third, still active, was in the case of the third child. I expect in a few years she will have another, which will be just like the others.

John North, Toledo: I have no criticism to make. I was glad he brought out the idea that the only way to diagnose tuberculosis of the lungs is by the microscope. When the microscope shows it, it is easy enough for the patient himself knows it and everybody else does. The doctor spoke of some patients not having cough; in all cases, I think, the irritation produces some cough. It may be only a few hacks in the morning.

As far as tuberculin is concerned, he said all that should be said.

Another means of early diagnosis is the pulse.

The tubercular pulse differs from every other pulse. I once heard a man say, who had charge of a sanitarium for several years, that if a half dozen people came into the room, and three of them were tuberculous, he could blindfolded pick out the cases. I think I could. The pulse is different and I think I can tell it, though I cannot tell how. Taking the pulse is a lost art. I have my patients sitting and I take the pulse; and stand and take the pulse, and lie down and take the pulse for a full minute. This will occur two years before you can actually diagnose the case by physical conditions. There is a difference of from eight to ten beats per minute in the healthy pulse, but not in the tubercular.

One of the cases of tuberculosis is that the patient is not immune. I have made the assertion in medical societies that if a patient contains the full proportion of calcium in the body he is immune. In tubercular patients this proportion is much lowered. If we can introduce lime into the system he will improve. The tubercular patient eliminates lime; the system is not in a condition to assimilate it. The things that give the best results are milk and eggs. Every quart of milk contains 24 grs. of calcium salts. Eggs contain the next largest proportion. Now let us take our milk and eggs together, and put the case in such condition as to absorb, by hydrochloric acid, and they assimilate and improve. Now, why does the pregnant mother have tuberculosis? Because she has taken the lime from her system to feed the baby.

C. F. Tenney, Toledo: I think Dr. Conwell will change his views when he gets a tuberculin he can rely upon. The thing to my mind of most importance in the question of tuberculosis is the early diagnosis. Why is not the early diagnosis made, when we have the means we have at present? Part of the family may have tuberculosis; they come to the office and it is diagnosed, and they are told they have a cold, and they probably look better than any other member of the family. It runs on eighteen months or two years, and then they have a hemorrhage and the trouble is done. We should give them a thermometer and ask them to take the temperature four times a day. If you find a temperature, then do the von Pirquet, but if you have your suspicion confirmed, then carry out the treatment and cure the patient. Many will say they had a cough some two years ago. They are in the second or perhaps the last stage of tuberculosis. The best place to stop is in the beginning. Let them take the daily temperature and keep the record for two weeks. I observe this practice in all cases.

L. A. Levison, Toledo: There is one fact stands out clearly, that the subcutaneous methods are most reliable; but in many cases there are reasons why we cannot use them, whether it be because the patient has a temperature, or has a chill, or there may be other reasons. In these cases we have to resort to our next most valuable means, which is the method of von Pirquet, which is not reliable in all cases. Many times it will not react, but there is a way of enforcing this reaction which I have found important. If, after making this test and the reaction is not at all positive, if we will wait until the next day and inject a small dose subcutane-

ously, we will get a positive reaction, even when the dose is not enough to induce a rise in temperature or added physical signs. This is not used enough. Where the test is not positive and where we do not wish to use the old method of Koch, it is valuable.

Dr. Hoover, Lima: There are a few points that I think should not be omitted. If you meet any one who has cold hands and feet, and has an aversion for being in a draft, or one who will not eat meat or beefsteak cooked rare, or who cannot or will not take milk, they should be looked upon as having incipient tuberculosis. If you depend on the tuberculin test and do not get reaction, you have no right to say that man has not tuberculosis, because fifteen per cent of these people will not react to the test. Another thing that ought to be done, whether they have tuberculosis or not, is to do the same things with them that you would do if you knew they had tuberculosis.

Dr. Berghausen, Cincinnati: In considering the early diagnosis, you must take into consideration all of the pathology which underlies. We know all cases are due to a primary bronchial lesion, and the infection takes place along the bronchial glands. In these cases you get the slight symptoms to which the writer of the paper has made reference. In judging as to whether the lung tissue is involved to a great extent, the skiagram has, I think, aided us considerably.

With regard to the use of tuberculin as a therapeutic measure, I have used it in some cases with good results and in others not. There is a tendency to localized conditions in the bronchi. The calcium salts enable them to become incapsulated. No doubt diet and other hygienic measures aid, but in the future, if the patient does not properly carry out the hygienic measures or use some judgment, there is a tendency for these things to spring up again. It has been the experience of those who have used tuberculin for a number of years, that those cases which have been given large doses have a tendency to recur in six or eight months, and no doubt they do hurry to a fatal termination; but I do not think it necessary to use such large doses. I frequently begin with small doses and run them up carefully. Sometimes the toxins form a disease in the circulatory system. Some cases do not stand the tuberculin well because of the changes in the circulatory system. We must always take into consideration that there may be a primary change in the kidneys, and care must be taken lest you set up a complication which should not result.

Dr. Tracy, Toledo: Is the tuberculin injection an immunizing material, or does it assist the system in producing this material?

Dr. Armstrong, Sylvania: What is the effect on the Diazo reaction?

Dr. DeWitt (closing discussion): I have had no experience with the Diazo reaction. If a reaction has not occurred from the use of Moro's ointment test or the von Pirquet test, I employ the subcutaneous injection of Koch's old tuberculin, and feel positive, if these patients have been infected with tuberculosis, that there will be a local or general reaction.

The main point I wish to bring out is that pa-

tients, apparently recovered from tuberculosis by the use of rest, food and fresh air, are not well and will react to the tuberculin test and a great percentage of them do relapse or in other words these patients do not have perfect immunity. Patients cured by rest, food and fresh air and given immunizing doses of tuberculin have a different appearance, do not relapse and remain cured.

The use of tuberculin in my experience has been perfectly satisfactory. The greatest benefits I have derived from its use have been in young people such as clerks and office help, who were anaemic, dyspeptic, neurasthenic and infected with early tuberculosis where they were compelled to continue their work and were unable to follow out a year or more treatment of rest, forced feeding and fresh air. By giving these patients a course of tuberculin, carefully administered, while they continued their work, they could be transformed from invalids to healthy individuals.

NEW CINCINNATI HOSPITAL.

Work has begun on the new Good Samaritan hospital, to be erected at Clifton and Dixmyth avenue in Cincinnati. The entire group, will cost an even \$1,000,000. The buildings will be five stories in height, with a basement underneath. In the center will be a shaft running the entire height of the structure, eighty-five feet in diameter, covered by an immense skylight. This central shaft will contain the elevators and administrative offices. Three wings will radiate from this, two of which are to be constructed at once, the other later. Each will be 50x150.

On the top floor of the northeastern wing will be ten operating rooms, each fitted up with tile floor and walls and the latest surgical appliances. On the top floors of the other wings will be the four open wards, two medical and two surgical, and divided for women and men. There will be a separate department for colored patients, a refrigerating plant, out-door clinic, roof garden for convalescents, home for nurses, private rooms and suites and all of the accessories of a modern hospital. According to authorities, the new building will be one of the most complete of its kind to be found anywhere in the world. There will be capacity for 400 patients.

"Alcohol is distinctly a poison, and the limitation of its use should be as strict as that of any other kind of poison. It is not an appetizer, and even in small quantities it hinders digestion. The use of alcohol is emphatically diminishing in hospital practice."—Sir Frederick Treves, Surgeon to King Edward.

At the onset of an acute attack of appendicitis the pain is usually referred to the gastric region.

NEW METHOD OF TREATING URETERO-CERVICAL FISTULA—REPORT OF A CASE.

EARL M. GILLIAM, M. D.,
Columbus, Ohio.

[Read before the Ohio State Medical Association.]

As a post-operative complication ureteral fistula is not of unfrequent occurrence. An injured ureter demands immediate attention. The usual methods of repair consist in an end to end or lateral anastomosis, implantation into the bladder or on the skin. Skin implantation usually requires a subsequent nephrectomy. A certain percentage of injured ureters are not recognized until a fistula is established. Trauma usually results from ligature or forceps pressure, and most likely to occur while securing the uterine vessels during a hysterectomy. A week or ten days may elapse before the slough is cast off and the fistula revealed. The formation of a ureteral fistula depends largely upon the character of the injury. A transverse severance of a ureter usually results in a fistula unless retraction of the divided ends prevents leakage. Should occlusion occur a hydroureter or a hydronephrosis ensues. An incision in the long axis of a ureter tends to heal readily, with but slight leakage, provided the distal end is patent. A ligature, if placed laterally on a ureter and removed before the completion of an operation, need not necessarily produce a fistula. In some instances ureters have been released at the expiration of forty-eight to fifty-six hours without serious results. Trauma, produced by forceps pressure, greatly increases the chance of fistula; even a few minutes compression may suffice. In one of the foreign clinics, in four hundred hysterectomies for carcinoma, there were over twenty-four instances of ureteral fistula following extensive exposure and dissection of the ureters and in all but two of these spontaneous recovery took place.

In Dr. Kelly's service at the Johns Hopkins Hospital, out of one hundred and fifty hysterectomies for cervical cancer, the ureter was accidentally injured in nineteen instances. In thirty cases reported of accidental ligation and clamping of the ureter, ten terminated in ureteral fistula. In reporting the following case of uretero-cervical fistula, the writer desires to present his method of treating it. Flora T., aged forty-two, widow. Residence, Columbus, Ohio. Mother of four children, the youngest fourteen years old. Patient admitted to St. Anthony's Hospital, Feb-

ruary 1, 1909. Examination revealed a large, multinodular, uterine fibroid impacted in the pelvis. Marked tenderness on palpation. A supravaginal hysterectomy was performed on February 2. Some difficulty was experienced in se-

paroxysmal pains in the lower abdomen. These pains lasted for some hours but ceased after a large quantity of urine gushed from the vagina. From now on, leakage persisted. A ureteral fistula was suspected but an examination was

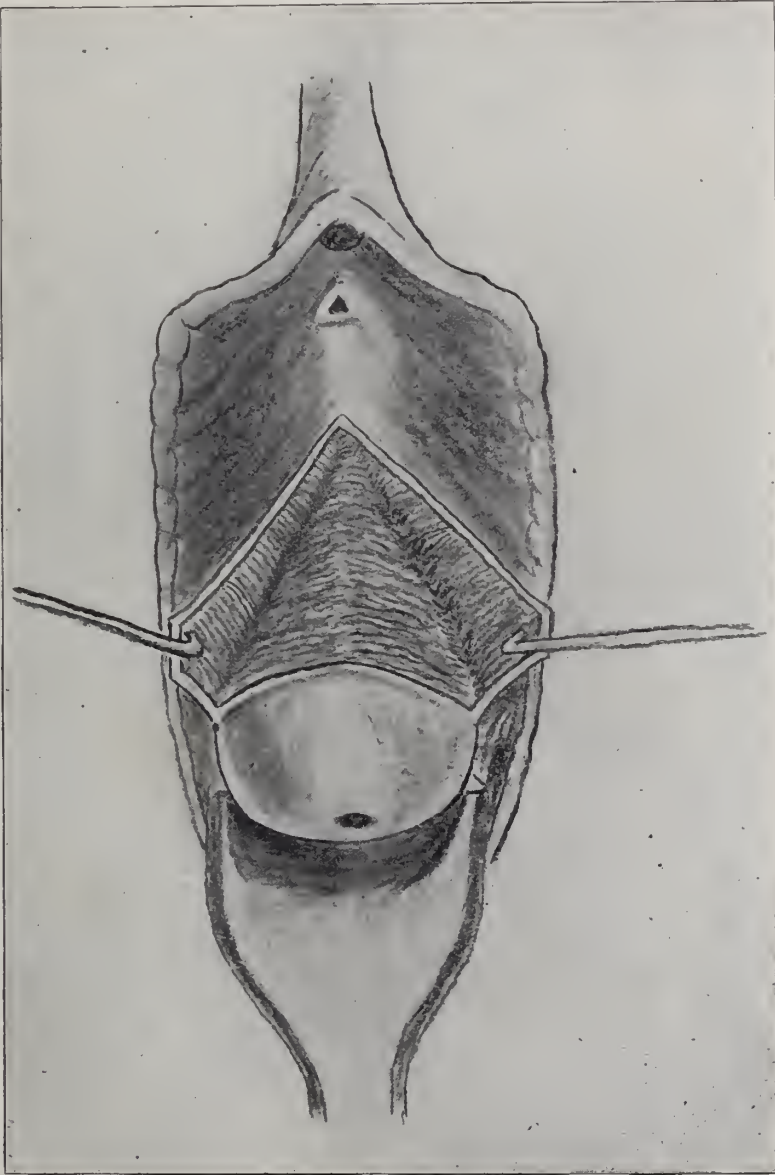


FIG. 1.

curing the uterine vessels. Troublesome hemorrhage occurred on the left side. For several days, following the operation, the patient vomited blood and also passed blood from the bowels. On the ninth day she experienced severe,

deferred until the patient had more fully convalesced. On the fifteenth day a vaginal inspection was made but no opening in the bladder or vault of the vagina was found. Tests for vesico-vaginal and vesico-utero vaginal fistula

proved nil. A cystoscopic examination was refused. After several inspections the urine was found escaping from the cervical os; a uretero-cervical fistula. The fistula, no doubt, was the result of forceps pressure on one of the ureters,

with her household duties but made of her a social outcast. She became morose, extremely nervous and afflicted with insomnia. After studying the matter over, an attempt was made on March 22, 1909, to divert the flow of urine into

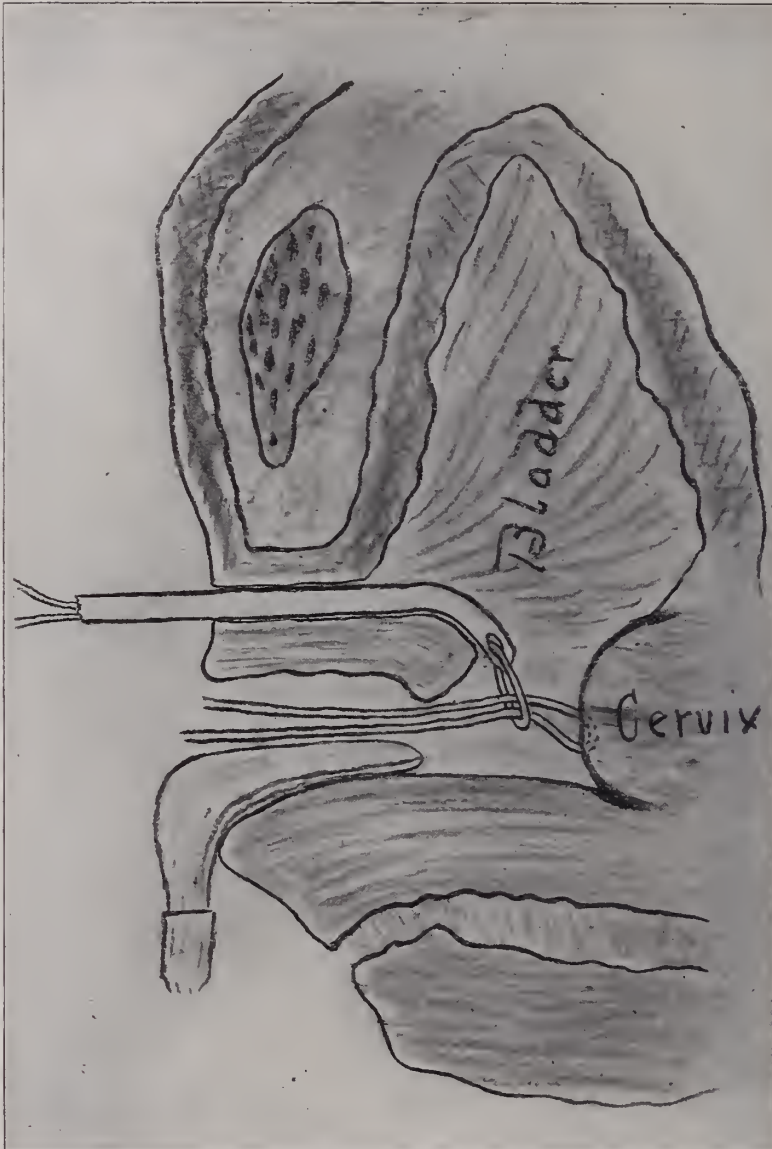


FIG. 2.

the slough giving way at the time the urine gushed from the vagina. An abdominal operation for the repair of the injured ureter was suggested but refused by the patient.

The patient's condition not only interfered

the bladder, by turning the cervix into that viscus.

Technic—After thorough preliminary preparation, the patient was anesthetized and placed in a lithotomy posture.

The vaginal wall was dissected from the bladder extensively on both sides through a median incision, and a crescentic incision around the cervix. (Fig. 1.)

The cervix was denuded in its entire extent

bladder being sufficient to admit the cervix. (Fig. 2.)

Interrupted chromic gut sutures fastened the anterior surface of the cervix to the upper portion of the vesico-vaginal opening.



FIG. 3.

with the exception of that portion of the tip which projected into the bladder.

A male catheter, armed with catgut, was then pushed up through the urethra and the bladder wall incised on the end of it, the opening in the

A ligature through the posterior lip of the cervix was then caught in the loop of the catheter suture and drawn out through the urethra, pulling the cervix into the bladder. (Fig. 2.)

The edges of the incision in the vaginal and bladder walls were tacked to the posterior denuded surface of the cervix with chromic gut and silk-worm sutures. No leakage on filling the bladder.

surface of the cervix was firmly attached but the posterior portion had failed to adhere. Leakage was greater than before, the urine escaping from both cervical canal and the vesico-vaginal opening. She was advised to return home and use

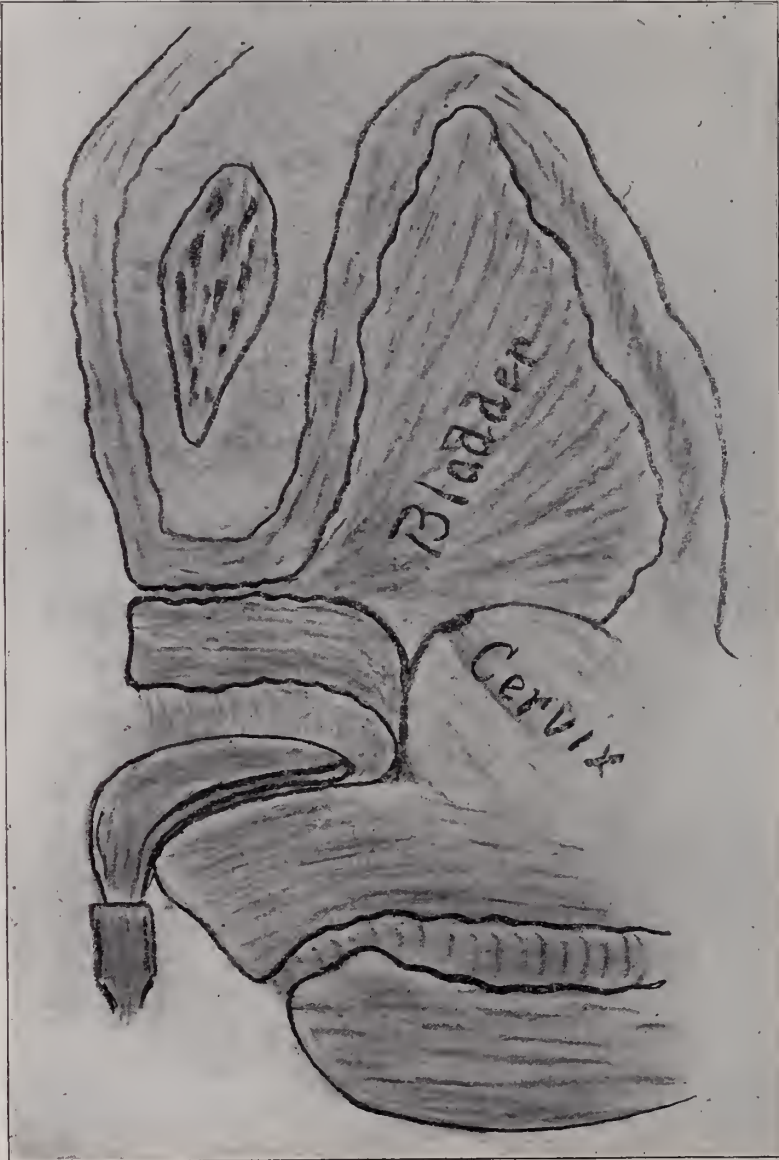


FIG. 4.

Up until the fifth day, following the operation, the urine was evacuated through the normal channel; on that day some leakage occurred.

The silk-worm sutures were removed on the sixth day, when it was found that the anterior

frequent douches. A rubber urinal was of but little benefit to her. April 5, 1909, she again entered the hospital. Examination showed a contracted bladder and marked narrowing of the anterior vaginal wall. For these reasons, at the

second operation, our former technic had to be modified to obtain sufficient material to cover the cervix.

First—The anterior and posterior vaginal walls were sufficiently denuded in a transverse ellipti-

Third—As in the former operation, a male catheter armed with catgut was passed into the bladder, its tip projecting through the vesical opening.

Fourth—A ligature through the posterior lip

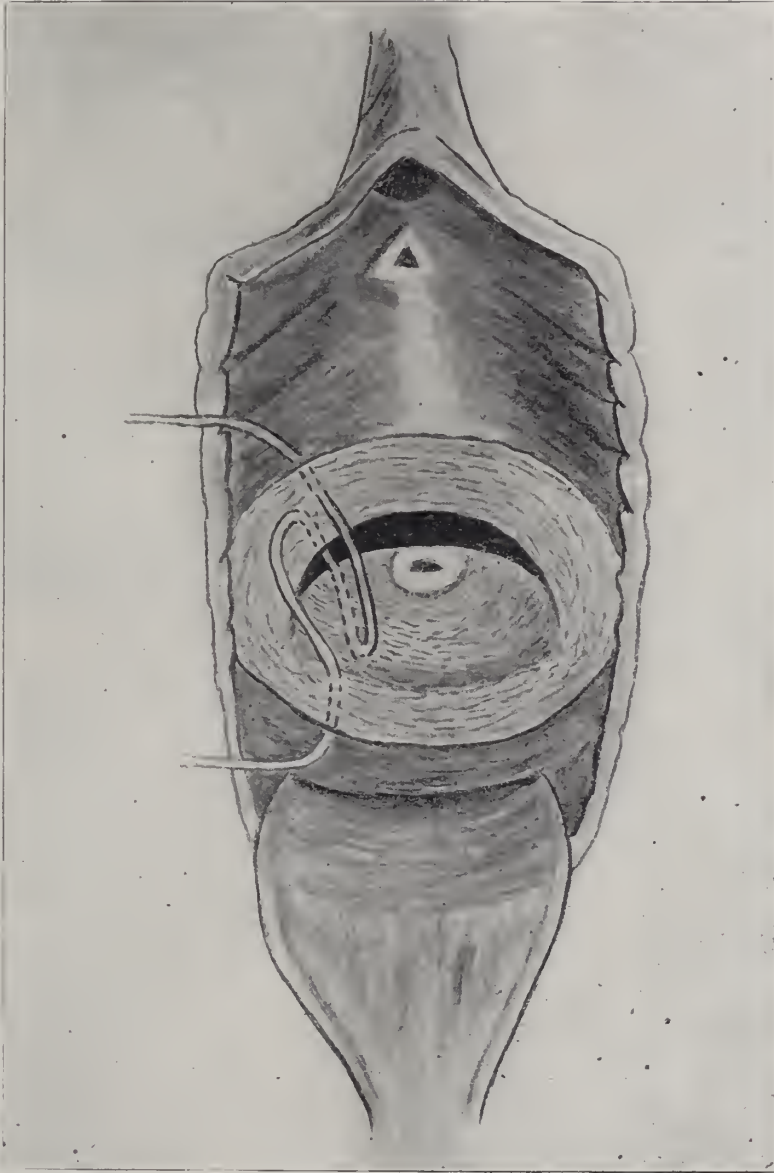


FIG. 5.

cal manner around the cervix and vesical opening to secure wide and easily coapted surfaces. (Fig. 5.)

Second—Freshening of the posterior surface of the cervix uteri. (Fig. 5.)

of the cervix was then caught in the loop of the catheter suture and drawn out through the urethra, pulling the cervix into the bladder. (Fig. 2.)

Fifth—Figure of eight silkworm gut sutures

were introduced in the following manner. (Figs. 3 and 5.)

The needle entered at the edge of the posterior denuded surface and emerged near the posterior sulcus, was carried across and transfixed the upper half of the anterior denuded area, thence across to the freshened cervix and back to the lower half of the anterior denuded surface, emerging at its edge. These sutures coapted the cervical, vesical and vaginal tissues in a transverse manner. (Fig. 4.) No leakage. Self-retaining catheter introduced and removed on the third day. The silk-worm gut sutures were removed on the ninth day. With the exception of a mild cystitis, which lasted several weeks, the patient experienced a smooth convalescence. Today she is in the best of health.

In conclusion I wish to state that uretero-uterine and uretero-cervical fistulae are extremely rare and heretofore their repair has not only been a difficult but very unsatisfactory procedure. Some years ago some one suggested turning the cervix into the bladder but so far I have been unable to find any reference as to technic. In uretero-uterine fistula I should not think it advisable to utilize the method just described as the menstrual discharge would be forced into the bladder and danger of calculi or infection courted.

In uretero-cervical fistula, with absence of the fundus uteri, this does not obtain and I see no reason why so simple and safe a method should not be selected in preference to intra-abdominal measures with their attending risks.

DISCUSSION.

R. B. Hall: I think the doctor has made a very good success of a very distressing accident to the patient, and he should be congratulated, as well as the patient. I think his remarks about the operation in case that the woman had her uterus still and menstruated, is correct, and you should not think of advising this operation if she still menstruates for reasons referred to. But unfortunately in many of these accidents we do not have the urine coming from cervix. In many operations for cancer, where the entire uterus has to be removed, you have leakage into the vagina or the vault of the vagina, and then the matter of repair is a more difficult one. The danger following the operation is greater because you may have leakage afterwards when you transplant the ureter. I think the paper is one of value, and should be adopted with a fair measure of success. Sometimes you have a uretero-cervical fistula when it is not so easy. I have in mind a case which is unreported. Several years ago I had occasion to remove a tumor, which was supposed to be an ovarian tumor, and the operation was performed. She had one child grown, and was engaged to be married, and she was very anxious to be relieved of her tumor.

It was of eighteen months duration, and among other things she told me a wish, and exacted something very important, which patients seldom exact. She said, "Now, Doctor, I want you to take my tumor out;" and I said surely I will. When I opened the abdomen I found my tumor was a post-peritoneal sarcoma. I removed it but had my difficulties. I opened a large blood vessel and my patient nearly died. The woman was forty years of age and past menopause. I had done so much damage to the tissues and blood vessels, I decided to remove the uterus, so I did this, and to my great surprise and chagrin I had the urine coming through the drainage tube afterwards. I had tied off one of my ureters. She wanted then to be cured of this uretero-fistula, but I wasn't willing to go back to that ureter. It was up to me to cure her, however, so I took out the kidney, and she is well today. I thought in extreme conditions it was well to do an extreme operation. I had no idea that I could locate the ureter in that case, and I had no idea of trying to.

R. S. Walker, Toledo: Our greatest work is in keeping our kidney from being infected. In nearly all of these cases there is more or less cystitis, and sometimes the cystitis is hard to control, and our greatest aim is to keep our patients from having a pyelitis or pyonephrosis. Now I think the genito-urinary man would take the stand that the kidney had better been sacrificed than to empty it into the bladder through the uterus, because with any kind of diverticulum in the bladder we have trouble enough, and in this case it would be impossible to keep a cystitis down. I am criticizing it only from a genito-urinary standpoint.

E. M. Gilliam (closing): With reference to nephrectomy, remember I said this woman would not subject herself to have a cystoscopic examination. So you see under what difficulties I was laboring. I had to do something. As too cystitis, there is always a possibility of this resulting, but this patient has been entirely free of bladder trouble with the exception of a few weeks following the operation. She has gained in weight and is pursuing her former vocation, and I must say that I am well pleased with the results obtained. Now a few words regarding hysterectomy where we have a malposition of the uterus or an intraligamentous growth present. Ordinary the relation of the uterus to the ureters is not disturbed, but if we have, for instance, an anteverted or retroverted uterus, or a latero-version then the relative position is changed and injury to the ureter may occur. Forceps pressure was, no doubt, in this case, responsible for the fistula, as the urine did not appear until sufficient time had elapsed for the slough to give way. Sampson, in his experiments, shows that provided the periureteral plexus of blood vessels is not disturbed, the nutrition of the ureter is not affected, although it may be handled and even skinned from its sheath without detriment to its function. But should a forcep or even a ligature compress these vessels, the resulting trauma may give rise to an infarct and necrosis ensue. I believe that is what occurred in this case.

BOOK REVIEWS

THE INTERNATIONAL MEDICAL ANNUAL—A YEAR BOOK OF TREATMENT AND PRACTITIONERS' INDEX. 1910, twenty-eighth year. E. B. Treat & Co., New York; cloth, \$3.50.

It is not necessary to review in detail this well known work. It presents at a glance a resumé of the advances during the past year, and this volume is especially full of valuable data in response to the unusual recent developments. It reviews the entire field of medicine and is therefore of interest to all specialties for ready reference.

EDUCATION IN SEXUAL PHYSIOLOGY AND HYGIENE. A Physician's Message. By Philip Zenner, Professor of Neurology in the Medical Department of the University of Cincinnati. Published by the Robert Clarke Company, Cincinnati, Ohio, 1910.

The author is to be congratulated upon his dexterous handling of this delicate topic. The subject matter is addressed mainly to the laity, particularly the young, but it is of interest to physicians in that it supplies a guide for instruction to their own clientele along similar lines.

Physicians are more and more called upon for such instruction and the experience and outlines found in this little work will be of great help in this direction.

DISEASES OF THE GENITO-URINARY ORGANS. By E. L. Keyes, Jr., M. D., Ph. D., professor of Genito-urinary surgery, New York Polyclinic Medical School, surgeon to St. Vincent's Hospital, etc. D. Appleton & Co., New York and London, 1910.

This very full and complete text-book upon the diseases of the genito-urinary organs will be found to be of benefit to the general practitioner and student. For the specialist in this line of work it will be of little value as it is not so exhaustive as many other works on genito-urinary diseases.

The author considers the subject from a medical and surgical standpoint and discusses gonorrhoea more fully than others of the recent text-books.

One of the best chapters, and one of the shortest, deals with the subject of asepsis in examination. This is a very practical phase of the subject and should be read by many practitioners.

The various commoner diseases and their treatment are considered in detail. The complications of these diseases and their relation to society are rather hastily glossed over.

The surgical part of the work considers the operations in common use today and explains the technic of these procedures. He includes, as do

all of the later text-books, all of the old obsolete operations for varicocele, hydrocele and kindred diseases.

The illustrations are neither many nor good and includes the usual shop catalogue of ancient tools.

In spite of the shortcomings mentioned the reviewer thinks that the book will be of service to the practitioner and student as it contains so much good advice concerning the diagnosis and treatment of those venereal diseases which they are constantly having to deal with.

DISEASES OF THE EYE. A Hand-book of Ophthalmic Practice for Students and Practitioners. By G. E. de Schweinitz, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania, and Ophthalmic Surgeon to the University Hospital; Consulting Ophthalmic Surgeon to the Philadelphia Polyclinic; Ophthalmic Surgeon to the Philadelphia Hospital; Ophthalmologist to the Orthopaedic Hospital and Infirmary for Nervous Diseases. With 351 illustrations and seven chromo-lithographic plates. Sixth edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company, 1910.

Dr. de Schweinitz's ability as a teacher and writer is universally recognized, and the appearance of this new edition of his work is evidence of the popularity and success of former issues.

This sixth edition contains much that is new in ophthalmology and cannot be too highly recommended to the student and practitioner of medicine.

EXERCISE IN EDUCATION AND MEDICINE. By R. Tait McKenzie, A. B., M. D., Professor of Physical Education, and Director of the Department, University of Pennsylvania. Octavo of 406 pages, with 346 illustrations. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$3.50 net; half morocco, \$5.00 net.

This is an excellent work and one well worth the careful reading, study and application of its precepts.

Too many of us prefactorily advise patients "to exercise" without the appreciation of the fact that directions for the use of this therapeutic measure should be as specific and as individual as in any other prescription.

Dr. McKenzie's writings are based on anatomic and physiologic foundations and clearly and graphically demonstrate the necessity of system and exactitude. The result aimed at must be established and then measures suited to the individual case must be intelligently employed.

His treatment of the subject is broad and general in application to schools and institutions,

(Continued on page 397)

The Ohio State Medical Journal

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THE OWEN BILL FOR CREATING A NATIONAL DEPARTMENT OF HEALTH.

The Owen bill for creating a National Department of Health has been published in a preceding number of THE JOURNAL, together with the eloquent speech of Senator Owen in support of his measure. The subject has been widely discussed and every physician is or should be thoroughly conversant with the various questions involved. By this time therefore, the views of the medical profession should be crystallized into a general opinion which should be firmly established and widely comprehended. Congress has adjourned with the bill not as yet brought to vote, but it will come up again at the next session and in the meanwhile there is opportunity for much excellent missionary work.

There seems to be a widespread feeling that something should be done to establish national health matters on a firmer base. The only opposition comes from the proprietary medicine interests and the various cults which exploit the public for their own selfish profits, and which have grounds for fearing anything whatever which savors of protecting the people from suffering or disease. They want an "open season" all the

year round with no restrictions of any kind. Hence the birth of the National League of Medical Freedom (God save the mark) with its newspaper appeals to credulity and ignorance, its righteous indignation over the curtailment of personal liberty and so on *ad nauseam!* We feel that this opposition will not receive very serious consideration, but it must be by no means overlooked, and every opportunity should be grasped to show its real object.

With regard to the general sentiment toward reorganization of national health matters, while as we have said above, there is more or less unanimity that something should be done, there are many honest differences of opinion as to the solution of the problem. Some think that the Owen bill by providing for appointment of political doctors will seriously impair the excellent laboratory work now being done in the Marine Hospital Service. Others think that a Bureau of Health is sufficient, alleging the great expense of a department as an objection. Still others for party reasons oppose the measure, and so on. In reply to the first, let us get our department and then see that it is properly safeguarded; it is foolish in the extreme to let what may be an empty shadow stand in the

way of a great benefit. Secondly, Senator Owen in his speech abundantly demonstrated the short comings of a bureau and the necessity of a department. If it is a necessity it will prove cheapest in the long run. Thirdly, if the dominant party is not content to pass a bill of this character simply because of its origin in the minority, in the name of thousands of sick and dying Americans let it provide a proper measure of its own! It is the substance we seek—not the name.

The State Association endorsed the Owen bill and sent its endorsement to every member of the Ohio delegation in Congress. Several replies have been received and are given in full in this issue of *THE JOURNAL*. Some as may be noted are *very* non-committal. The writer promises "to give the matter his careful consideration." Only one seems actually opposed, and he, Senator Burton, frankly intimates his position, and he may be open to conviction. One or two are very favorably inclined toward the measure.

We have as yet heard nothing from Representatives H. P. Goebel, W. E. Touvelle, J. Warren Kiefer, R. D. Cole, I. R. Sherwood, A. R. Johnson, Albert Douglas, C. Anderson, W. G. Sharp, James Joyce, D. A. Hollingsworth, W. A. Ashbrook, James Kennedy, W. A. Thone, Paul Howland and James Cassidy.

As a State Association we have endorsed the Owen measure as something concrete in the shape of a health measure, and the very best so far offered; it aims at a department, because such is a necessity. Bureaus have been weighed in the balance and found wanting. We are willing to accept a similar measure if it incorporates the Owen ideas, if the dominant party so desires.

As individual members we can do a great deal between now and the next session of Congress. Many members are up for reelection, and most of the remainder will be at home seeking the opinions of their constituents. Now is the time to create public

opinion and to bring personal pressure upon our senators and congressmen. To them *vox populi* is indeed *vox dei*, but the peoples' voice must speak in no uncertain terms, and ours is the part to train and develop that voice so that its meaning may be unmistakable.

THE ST. LOUIS MEETING.

The St. Louis meeting of the American Medical Association was an excellent one. While the attendance was not as large as at Chicago or Boston, it was greater than at the last two meetings at Atlantic City. The latter has so often been spoken of as the ideal meeting place, and so much has been claimed for its hotel advantages and railroad facilities, etc., that it is interesting to note that in the last five meetings the three which have been held elsewhere have all surpassed those held at Atlantic City. Personally, we feel that Atlantic City as a pleasure resort is unsurpassed in this country, but as a meeting place of the American Medical Association it has been weighed and found wanting.

The weather at St. Louis was not as favorable as could have been wished, but interfered but little with the meetings.

The general sentiment was as harmonious as one could wish. The sessions of the House of Delegates were well attended and the work was conducted in a thoroughly business-like method. The scientific sessions were splendidly attended and the papers and discussions were of an exceedingly high character. The entertainments provided by the St. Louis hosts were lavish, and everywhere there was abundant proof of the spirit of cordial hospitality that added greatly to the enjoyment of the visitors.

The choice of Los Angeles as the next meeting place is in recognition of the claims of the west to consideration. No section of the country has been more faithful in attendance, nor more deserving of such rec-

ognition than California. Los Angeles is abundantly able to accommodate the Association and doubtless with such an opportunity for visiting the famous resort, a large delegation will be in attendance from the east which, with the faithful west, should make Atlantic City look to her laurels.

LABORATORY DIAGNOSIS.

We would draw especial attention to the article under the above title by Francis Carter Wood in this number of THE JOURNAL. It was presented as a special address before the Medical Section at the State Meeting at Toledo, and is an exceedingly timely summing up of a subject, upon which Dr. Wood as a laboratorian of recognized ability, wide reputation and experience is enabled to speak *ex cathedra*.

There has been manifested from time to time a certain amount of antagonism between laboratorians and clinicians, for which both sides are partially at fault. The former, often very lacking in clinical experience, have thought clinicians slow to adopt the newer tests, that they lack scientific thought and cling to empirical methods. The clinicians on the other hand, feel often that laboratorians claim too much; having seen tests and methods rise and fall into disuse, they have become conservative, possibly in many instances too conservative.

The time must come, however, when all such feeling must be laid aside, and party lines abolished. Every laboratorian should seek as much clinical experience as he can secure and the practitioner must adopt as much of the laboratory as practicable. The two must work hand in hand, uniting in the employment of every method and means to recognize disease. In Cabot's address before the medical section at St. Louis, he showed that in a series of 1000 cases observed in a hospital, and controlled by post mortem examinations, the diagnoses were

confirmed in about 66 per cent, and this is unquestionably much better than in private practice. It is to be hoped that the future will show better results, which, however, will only be obtained by thorough co-ordination of effort and the union of scientific investigation with practical application.

EDITORIAL NOTES

The following papers by Ohio members were presented at the St. Louis meeting of the American Medical Association:

SECTION ON PRACTICE OF MEDICINE—Regional Vasomotor Hypertonus, with a Report of Case, C. F. Hoover, Cleveland; Clinical Results of Gastroenterostomy for Non-Malignant Diseases, John D. Dunham, Columbus; The Influence of Perigastric Lesions on Gastric Secretions, Based on Clinical and Experimental Study, M. J. Lichty, Cleveland; The Treatment of Typhoid Carriers, with Report of a Case Treated by Inoculations of Typhoid Vaccine, Willard J. Stone, Toledo.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN—Intraperitoneal Implantation of Round Ligaments (Gilliam's Operation), D. Tod Gilliam, Columbus; The Results Obtained by the Radical Abdominal Operation for Carcinoma of the Uterus, J. H. Jacobson, Toledo.

SECTION ON SURGERY—Extracapsular Fixation of the Kidney, Charles A. L. Reed, Cincinnati; Certain Surgical Aspects of Goiter, G. W. Crile, Cleveland.

SECTION ON OPHTHALMOLOGY—Demonstration of the Smith Operation for Cataract, D. W. Greene, Dayton.

SECTION ON LARYNGOLOGY AND OTOLGY—The Pathology of Mastoiditis as Revealed by the X-Ray, Sydney Lange, Cincinnati.

SECTION ON NERVOUS AND MENTAL DISEASES—The Topographical Diagnosis of Subtentorial Tumors, Herman H. Hoppe, Cincinnati.

SECTION ON STOMATOLOGY—A Study of the Repair of the Cementum, M. H. Fletcher, Cincinnati.

SECTION ON DISEASES OF CHILDREN—Surgical Mistakes in Practice on Infants and Children, Samuel W. Kelley, Cleveland; A Clinical and Roentgenographic Study of the Essential Differences Between the Physical Findings in Childhood and Adult Life, Louis A. Levison and Harry Dachtler, Toledo.

SECTION ON DERMATOLOGY—Hairy Tongue, M. L. Heidingsfeld, Cincinnati.

SECTION ON PHARMACOLOGY AND THERAPEUTICS—Various Forms of Experimental Diabetes and Their Significance for Diabetes Mellitus, J. J. R. MacLeod, Cleveland.

SECTION ON PATHOLOGY AND PHYSIOLOGY—Further Observations on the Hemolytic Test for Cancer and on the Behavior of Autodermic and Isodermic Skin Grafts in Operative Cases, George W. Crile, Cleveland; A Series of Spontaneous Tumors in Wild Rats, Paul G. Woolley and W. B. Wherry, Cincinnati.

The following were registered from Ohio at the St. Louis meeting of the A. M. A.:

Anderson, H. B., Newark; Ayres, S. C., Cincinnati.

Barker, F. D., Dayton; Bain, F. D., Kenton; Beebe, B. F., Cincinnati; Blankenhorn, H., Orrville; Bessey, J. M., Toledo; Bethel, L. P., Columbus; Blair, B. H., Lebanon; Berghausen, Oscar, Cincinnati; Bolt, Richard A., Cleveland; Bowers, L. G., Dayton.

Campbell, Wm. H., Cincinnati; Craig, E. M., Norwood; Clemmer, J. W., Columbus; Coons, Jacob Jones, Columbus; Coombs, J. W., Camden; Crile, G. W., Cleveland; Carson, F. D., Benton; Coleman, N. R., Columbus; Crisler, C. G., Cincinnati; Culbertson, N. W., Massillon; Corlett, W. T., Cleveland.

Dawson, N. B., Sterling; Donnelly, J., Toledo; DeVilbiss, A., Toledo; DeWitt, J. P., Canton; Daniels, R. P., Toledo; Dissinger, Hiram, Canal Fulton; Duncan, James A., Toledo.

Evans, George B., Dayton; Fihe, C. C., Cincinnati; Fisher, V. L., Mt. Vernon; Friedlander, Alfred, Cincinnati; Foster, S. D., Toledo; Fletcher, M. H., Cincinnati; Ford, S., Cincinnati.

Gibson, R. D., Youngstown; Greene, D. W., Dayton; Geier, Otto P., Cincinnati; Gilliam, D. Tod, Columbus; Gillette, Wm. J., Toledo.

Holland, A. B., Wellsville; Haines, W. D., Cincinnati; Henry, W. H., Hamden Junction; Hickin, Frank W., Cleveland; Hobson, J. A., Flushing; Hoover, Delbert E., Warren; House, A. F., Cleveland; Hall, E. M., Delaware; Hahn, E., Leetonia; Hamilton, W. D., Columbus; Haring, H. C., Dayton; Heidingsfeld, M. L., Cincinnati; Hoover, C. F., Cleveland; Hogue, D. W., Springfield; Howells, J. O., Bridgeport; Hoppe, H. H., Cincinnati; Hubble, Wm. B., Elyria; Huston, E. M., Dayton.

Jacobson, J. H., Toledo; Jerome, M. A., Toledo; Jones, I. D., Cincinnati; Jewett, H. S., Dayton; Johnston, J. Ambrose, Cincinnati.

Kahler, J. Frank, Canton; Keller, John G., Toledo; Kelley, Samuel W., Cleveland; Knight, Arthur L., Cincinnati; Krebs, Paul H., Cleveland; Kreidler, A. G., Cincinnati; Krouse, Louis J., Cincinnati; Kendell, H. W., Covington; Kofron, J. V., Cleveland; Kopfstein, F. T., Cleveland.

Larimore, F. C., Mt. Vernon; Lichty, M. J., Cleveland; Langdon, F. W., Cincinnati; Leonard, W. W., Akron; Lewis, R. C. M., Marion; Lange, S., Cincinnati; Lamb, Frank H., Cincinnati; Larkin, J. C., Hillsboro; Lawrence, Florus F., Columbus; Leahy, Maurice, Tiffin; Levison, Louis A., Toledo.

March, E. J., Canton; McCollam, James A., Uhrichsville; McGayran, Charles W., Columbus; McKee, E. S., Cincinnati; Moore, J. M., Cleveland; Morrow E. O., Canton; Murphy, John W., Cincinnati; McCray, O., Miamisburg; MacLeod, G. D., Cleveland; McKittrick, A. S., Kenton; Manning, W. J., Cleveland; Manning, W. J., Cleveland; Means, W. J., Columbus; Minor, C. L., Springfield; Moots, C. W., Toledo; Millette, J. W., Dayton; Mithoefer, Wm., Cincinnati; Moss, W. F., Mainville.

Noble, H. S., St. Marys.

Olmstead, D. S., Millersburg; Oliver, John Chadwick, Cincinnati.

Pomerene, H. P., Canton; Podleioski, S. J., Steubenville; Price, J., Columbus; Pollock, R., Cleveland; Pomeroy, F. S., Charden; Powell, E. A., Cleveland.

Ravogli, A., Cincinnati; Rhodes, G. B., Cincinnati; Ryall, G. W., Wooster; Rinehart, H. D., Dayton; Ranly, John, Cincinnati; Reed, Charles A. L., Cincinnati; Roop, William O., Dayton; Rockbill, C. S., Cincinnati; Rodebaugh, H. A., Columbus; Rosewater, Nathan, Cleveland; Rouse, W. L., Paintersville; Rush, Andrew W., Greenville.

Smith, E. O., Cincinnati; Smith, Webster S., Dayton; Stauffer, G. W., Akron; Stevenson, Mark D., Akron; Southern, Chas. T., Cincinnati; Swartsel, S. C., Cincinnati; Sawyer, J. P., Cleveland; Silver, H., Middletown; Smead, H. E., Toledo; Smith, H. M., Clarington; Stahl, S. S., Franklin; Stamm, W., Fremont; Steele, R. G., Melmore; Stone, W. E., Toledo; Sloan, H. E., Cincinnati; Smith, A. B., Wellington; Snyder, W. H., Toledo; Sutton, H. T., Zanesville.

Taylor, W. R., Ft. Recovery; Thomas, G. F., Peebles; Tucker, E. D., Toledo; Thrasher, A. B., Cincinnati; Thomas, J. J., Cleveland; Tuckerman, J. E., Cleveland.

Upham, J. H. J., Columbus.

Vail, Derrick T., Cincinnati; Van Winkle, B. L., Belpre.

Walker, A. B., Canton; Warner, F., Columbus; Williams, M. R., Cincinnati; Wyler, J. S., Cincinnati; Wakefield, J. D., Loveland; Wright, W. E., Newark; Walker, Robert S., Toledo; White, Milford W., Ravenna; Wire, G. W., Wilmington; Woodward, H. L., Cincinnati; Wright, Jno. W., Columbus; Whitacre, H. J., Cincinnati; Wolfenstein, Leo, Cleveland.

Yocum, L. A., Wooster.

Zenner, Philip, Cincinnati; Zinke, E. Gustav, Cincinnati; Zininger, George F., Canton.

IN MEMORIAM.

The citizens of Toledo, and especially those of the medical profession, mourn the loss of William Crossman Chapman, born August 15, 1840, died May 29, 1910. The doctor had been a patient sufferer from renal trouble for many years and his patience and sweetness of temper under this affliction endeared him the more to those who were around him.

The doctor had had an education in pharmacy and graduated in medicine from the Miami Medical College of Cincinnati in 1873. He was appointed to the Ohio State Board of Health by Governor Nash, and was at one time president of this board. At the time of his death he was serving his second appointment and was greatly interested in sanitary measures, never failing to attend the meetings of the American Public Health Association. He was president of the Ohio State Medical Association in 1892, and

president of the Toledo Medical Association in 1897.

His activities were not confined to medical organization alone, as he has been at various times president of the Adams Mission, of the University Extension, of the Federated Charities, and was an active and beloved member of the Board of Elders of the Collingwood Avenue Presbyterian Church.

Dr. Chapman was much loved by the younger men of the profession, who felt that he had a warm place in his heart for them, which indeed he did. He was the one consulted in all matters of civic good, which affected or touched the medical profession. His loss is one the community has not yet begun to feel, but his cordial support and executive ability will be missed in many civic undertakings of the future.

ANENT THE DEATH OF WILLIAM C. CHAPMAN.

Report of the Committee of the Academy of Medicine of Toledo and Lucas County, on the death of William C. Chapman:

Immediately that one speaks of Dr. Chapman in the past tense, there comes to that one the thought and feeling that a place in his life which was once filled, is now empty; that his environment has been changed; and he feels somewhat of loneliness, and in consequence a little less secure of his hold upon those things which are back of his life's purpose.

Manhood reciprocates to manhood, in giving stimulus for honorable, persevering effort, and in giving courage when courage is a boon to mankind. So that to say tonight that Dr. Chapman was, is to express a certain degree of weakness, offensive and defensive; and also the feeling that our invigorating dependable reserve force has been heavily drawn upon; and all because the recognized influence of Dr. Chapman has seemingly been lost to us.

It is not the expression of a mere sentimental fancy, but the statement of a profound truth, to say that environment is a whirlwind and tempest of like and unlike, agreeing and disagreeing psychic projections in lightning like motion. Our varying mentalities have been handed down to us from similar storms of thought in the past, and our inheritance shapes the course and marks the directions which our intellectual activities take.

Every live, thinking man places his thought upon environment. Dr. Chapman was such a man. He succeeded in adding something to those forces, which of one day and time, are the making of civilization of the next day, and of the

future. Environment is not only the sum of all thinking and all human endeavor, but it shapes and moulds individual life as well.

A retrospective glance at Dr. Chapman's life shows that the lessons which environment taught him were such as to continually lead him into broadened paths of usefulness.

The assertion does not need argument, that environment is made up of every possible thing of the kind between that force which represents the highest ideal of human progress and those which represent the antithesis of the lowest and most destructive to the human race. This is not an eulogy of Dr. Chapman, but a holding up of what we all know of him, the crystal of his life, to the white light of the best things of men.

He has been trustworthy, he has been helpful, he has been kind, he has inspired hopefulness and courage. He has been in harmony with the best endeavors of men, and his chiefest monument will not be in marble or granite, neither will it be in the affectionate and respected recollection of those who knew him as priceless as such a monument is; but rather in the imprint he has made upon eternal things, which, however small it may now seem, shall never cease to be adding to the good of mankind in memory of the life of William C. Chapman.

Resolved, That these preambles and resolutions be engrossed upon the records of the Academy of Medicine, published in the local newspapers and THE OHIO STATE MEDICAL JOURNAL, and, as an indication of profound sympathy, a copy be sent to the bereaved family.

O. HASENCAMP,

A. DEVILBISS,

J. A. TRACY,

Committee.

RESOLUTIONS ADOPTED.

Report of the Committee of the Academy of Medicine of Toledo and Lucas County, on the death of William G. Gardiner:

WHEREAS, In the order of Nature, our friend and associate, William G. Gardiner, has passed from our midst; and

WHEREAS, Dr. Gardiner, for a long term of years, has been an estimable, worthy and highly respected citizen of Toledo; a generously provident husband and father, and a reputable physician, whose extensive practice and great success are ample criterions of high qualifications and character; therefore be it

Resolved, That in the death of William G. Gardiner, Toledo has lost a resident whose everyday life was an ideal exemplification of sterling integrity, untiring industry and good citizenship, his family, an unselfish, guardian whose liberality in educational provision endowed his children with the greatest and most enduring of legacies;

the profession of medicine, a member whose scholarly attainments, finely modified by characteristic and noteworthy modesty, might well be profitably emulated by other physicians and the Academy of Medicine of Toledo and Lucas County, a highly esteemed associate, whose strict devotion to duty, close regard of ethics, unquestioned worth as a practitioner and marked professional success afford a strong and logical plea for respectability in medicine.

Resolved, That these preambles and resolutions be engrossed upon the records of the Academy, published in the local newspapers and THE OHIO STATE MEDICAL JOURNAL, and, as an indication of profound sympathy, a copy be sent to the bereaved family.

J. A. WRIGHT,
J. L. WATSON,
S. S. THORNE,
Committee.

CONVENTION OF EXAMINING AND LICENSING BOARDS.

Abstract of the transactions of the National Confederation of State Medical Examining and Licensing Boards:

The twentieth annual convention of the National Confederation of State Medical Examining and Licensing Boards was called to order at the Southern Hotel, St. Louis, Mo., by the president, A. Ravogli. After an invocation by the Rev. Stephen F. Sherman, Jr., A. H. Hamel, chairman of the local committee of arrangements, introduced Joseph S. Grindon who delivered the address of welcome, which was responded to by Joseph C. Guernsey.

Dr. Ravogli delivered the annual address of the president, "A Plea for More Practical and Extended Clinical Instruction for Medical Students." The report of the secretary-treasurer, M. G. Motter, was read, audited and approved, showing a total of \$557.89, with a balance of \$288.08. The report of the executive council was read by N. R. Coleman, referred to a committee which commended the subject matter for its practical value to medical educators and recommended the adoption of an amendment to the constitution providing for a corresponding secretary, and the appointment of a committee to confer with a committee from the American Confederation of Reciprocating, Examining and Licensing Medical Boards on the feasibility of uniting the two bodies. According to the subsequent report of this committee, the proposed union was found to be impracticable at present. The report of the Committee on Clinical Instruction, by Henry Beates, and that on Materia Medica, by M. G. Motter, were read and referred for publication.

The paper by Abraham Flexner, of the Carnegie Foundation, on "The State Boards in Re-

lation to Medical Education," elicited a lively discussion and was the subject of considerable newspaper comment.

The Symposium on Clinical Instruction was opened by George Dock, who said that present school conditions warrant the introduction by the boards of practical examinations, that the material is available, that their purpose should be to test the applicants' methods and that they would necessitate expert examiners. Fred C. Zapffe contributed a valuable and timely paper on the present status of clinical instruction. J. C. Guernsey discussed the advantages of the old preceptor system. J. C. Oliver opposed the lengthening of the medical course to five years. A. F. Stephens dwelt upon the importance of post-graduate clinical work. With reference to the introduction of practical examinations by the State Boards, Thomas McCrae discussed instruction in clinical medicine; A. D. Bevan instruction in Clinical surgery; C. F. Hoover instruction in diseases of the heart and lungs; W. A. Hardaway, diseases of the skin, and D. T. Vail, refraction. J. Coons outlined the methods of practical examinations in histology, pathology, bacteriology, urinalysis, etc.

The Board of Medical Examiners of Utah, the Medical Board of Arkansas Medical Society, the Eclectic State Medical Board of Arkansas, and E. J. Collins, A. H. Hamel, Frederic Singer, Darlington Snyder, R. O. Tucker, and N. P. Colwell were admitted to membership in the Confederation.

The following officers and committees were elected: President, J. C. Guernsey, Philadelphia, Pa.; First Vice President, James A. Egan, Springfield, Ill.; Second Vice President, Charles A. Tuttle, New Haven, Conn.; Secretary-Treasurer, George H. Matson, Columbus, Ohio; Assistant Secretary, Darlington Snyder, Columbus, Ohio; Executive Council, N. R. Coleman, Columbus, Ohio; Edwin B. Harvey, Boston, Mass.; James A. Duncan, Toledo, Ohio; A. H. Hamel, St. Louis, Mo.; D. P. Maddux, Chester, Pa. Committee on Clinical Instruction, Henry Beates, Philadelphia, Pa.; Charles A. Tuttle, New Haven, Conn.; Fred C. Zapffe, Chicago, Ill.; Maurice J. Lewis, New York, N. Y.; L. F. Bennett, Beloit, Wis. Committee on Materia Medica, M. G. Motter, Washington, D. C.; J. C. Guernsey, Philadelphia, Pa.; George MacDonald, Washington, D. C. Committee on Lay Publicity, Darlington Snyder, Columbus, Ohio; Frederic Singer, Pueblo, Col.; Fred C. Zapffe, Chicago, Ill. Committee on Abraham Flexner's paper: W. J. Means, N. P. Colwell and Henry Beates.

ABSTRACT OF PROCEEDINGS OF THE HOUSE OF DELEGATES OF THE A. M. A.

St. Louis, June, 1910.

The sixty-first annual session of the American Medical Association was held at St. Louis, Mo., June 6-10, 1910. The registration was 4070, this being the third meeting of the Association in point of size and only surpassed by the Boston session in 1906 and the Chicago session in 1908. The weather was practically perfect and the local arrangements admirable.

The House of Delegates met on Monday in the auditorium of the St. Louis Medical Society building. The president, Dr. W. C. Gorgas, U. S. A., read his address in which the work of the Association was commended and a number of suggestions made. The report of the general secretary showed that during the past year 289 members had died, 1937 had resigned, 1031 had been dropped and 95 had been removed from the rolls on account of being reported as "not found," making a total loss of 3352. During the year 3593 new members were added, making a membership on May 1, 1910, of 34,176. The application of the Medical Association of the Isthmian Canal Zone for recognition as a constituent association was presented. The death of ex-President Herbert L. Burrell was commented on. The secretary presented a tabulation showing the membership in the constituent State Associations amounting to 70,146. The history of the secretaryship and its connection with the editorship of The Journal was reviewed. Dr. Simmons presented his resignation as general secretary and asked that it be accepted. The report was referred to the Reference Committee on Reports of Officers.

The report of the Board of Trustees showed encouraging progress in all lines of Association work, the work of the Council on Pharmacy and Chemistry, Council on Medical Education, Committee on Medical Legislation, Committee on Nomenclature and Classification of Diseases and the Committee on Ophthalmia Neonatorum being especially commended. The Trustees recommended that the report of the Committee on Organization of a Council on Health and Public Instruction be carefully considered. The addenda to the Trustees' report included a report from the subscription department, showing the average weekly circulation of The Journal for 1909 as 55,361. The treasurer's report showed a surplus in the treasurer's hands on January 1, 1910, of \$163,340.72. The auditor's report showed property to the amount of \$172,081.86, and total assets of \$399,462.16. The report was referred

to the Reference Committee on Reports of Officers. The report of the Committee on Medical Legislation was presented by Dr. C. A. L. Reed of Cincinnati, chairman. The year's work on national and state legislation was reviewed. Dr. Reed presented his resignation as chairman of the committee. The report was referred to the Reference Committee on Legislation and Political Action. Dr. A. D. Bevan, Illinois, presented the report of the Council of Medical Education, stating that during the past year the second tour of inspection of medical schools of the country had been made and submitting as a part of the report a classification of medical schools into three classes: (a) acceptable, (b) needing certain improvements to make them acceptable, and (c) those which would require complete reorganization. The report of the council was referred to the Reference Committee on Medical Education.

At the afternoon session, the Board of Public Instruction and the director of the post-graduate work submitted their reports. Dr. F. Park Lewis submitted the report of the Committee on Ophthalmia Neonatorum, reviewing the work of the past year and recommending that its work be enlarged so as to include all preventable causes of blindness; also that renewed efforts be made to have all births reported promptly so as to make more thorough work in the prevention of blindness. The report was adopted and the committee continued.

Dr. H. O. Marcy, Massachusetts, submitted the report on Davis Memorial Fund, showing total contributions of \$2771.34. Dr. Marcy presented his resignation as chairman and Dr. Billings presented his resignation as secretary of the Davis Memorial Fund. The report was referred to the Board of Trustees. The Committee on Nomenclature and Classification of Diseases reported progress. The Council on Defense of Medical Research reported the publication during the past year of thirteen pamphlets written by experts in the various fields and prepared for general distribution. The council has also given much material to the daily press. The formation of a society of laymen for the promotion of medical research is being considered.

The reports of the following committees were presented: Patents and Trademarks, Uniform Regulation of Membership, Elaboration of the Principles of Ethics, and the United States Pharmacopeia. The Committee on Anesthesia reported progress. It finds itself as yet unable to submit full and final reports for publication, but reaffirms the finding of the committee in 1908 that for general use ether is to be regarded

as the safest anesthetic. Major M. W. Ireland, U. S. A., presented a report from the Committee on Insignia, recommending the adoption of an official button showing the knotted rod and serpent as the insignia of the Association. Dr. Edward Jackson, Colorado, presented a report from the Committee on the Establishment of a Physicians' Sanitarium, recommending the appointment of a committee to draw up a plan for a corporate body to receive and administer funds for the relief of disabled physicians and to establish a sanatorium for physicians suffering from tuberculosis. The report was referred to the Board of Trustees. President Gorgas submitted a report from the Committee on Memorial to Medical Officers of the Civil War, showing that three members had been appointed and that the two remaining positions would be filled by the appointment of one volunteer surgeon from the Union army and one from the Confederate army. After the presentation of a number of resolutions, which were referred to appropriate committees, the House of Delegates adjourned until Tuesday.

The House met on Tuesday afternoon with the newly installed president, Dr. William H. Welch, in the chair. Dr. Frank B. Wynn, Indiana, presented the report of the Committee on Scientific Exhibit, recommending the preparation of cheap, compact and complete exhibits for the education of the public on all the problems of public health and comfort. Dr. Alfred Stengel, Pennsylvania, presented the report of the Committee on Scientific Research, showing that three grants of \$200 each had been made for the current year, as follows: Dr. R. M. Pearce, New York; Dr. Gerald B. Webb, Colorado, and Dr. E. C. Rose-nau, Chicago. The Committee on Organization of a Council on Health and Public Instruction recommended that the Committees on Organization, Medical Legislation, Public Instruction and Defense of Medical Research be abolished and that a council of five, to be known as the Council on Health and Public Instruction, be created. The report was referred to the Reference Committee on Amendments to the Constitution and By-Laws. The Reference Committee on Sections and Section Work reported, recommending the organization of a section on Genito-Urinary Diseases with the following officers to serve during the coming year: Chairman, W. T. Belfield, Chicago; vice-chairman, James Pederson, New York; secretary, Hugh Young, Baltimore. The committee recommended that sections on physical forces in medicine and on hospitals be not established at present. The report was adopted. The Reference Committee on Medical Education endorsed the work of the Council on Medical Edu-

cation and recommended that the rating and classification of medical schools as determined by the council should be made public and that the council should be instructed to continue its investigations. The classified list of colleges was presented as a part of the committee's report.

The Reference Committee on Reports of Officers recommended that the request of Dr. Simmons regarding his resignation as general secretary be respected and that his resignation be accepted in order that he might devote himself exclusively to the duties of editor of *The Journal of the American Medical Association*. This report was adopted. The Reference Committee on Miscellaneous Business recommended that the reports of the Committees on Pharmacopeia, Nomenclature and Classification of Diseases and Miscellaneous Business be accepted and the committees continued. Dr. J. N. McCormack presented the report of the Committee on Organization, reviewing the work done for a department of public health and presenting the following resolutions:

Resolved, That the president be, and is hereby, authorized to appoint a committee of seven members, which shall be charged with the duty of framing a bill for a national department of health, to be presented to the next session of congress in December, and that this committee shall consider and determine all matters and policies relating to national health legislation, and may invite the co-operation and co-operate with other organizations having the same purpose in view.

Resolved, That the principles of the Owen bill, having for its object the creation of a national department of health, now pending in the senate, and similar bills introduced in the house by Representatives Simmons, Creger and Hanna, be, and are hereby heartily approved by this Association, and the cordial thanks of the medical profession of the United States, officially represented by it, are hereby tendered to Senator Robert L. Owen, Irving Fisher and their co-workers for their able and unselfish efforts to conserve and promote the most important asset of the nation, the health and lives of its women, its children and its men, properly understood the greatest economic question now confronting our people.

The members of this Association stand for pure food, pure drugs, better doctors, the promotion of cleaner and healthier homes, and cleaner living for individuals, for the state and for the nation. We believe this to be held as equally true by the reputable and informed physicians of all schools or systems of practice.

We welcome the opposition of the venal classes long and profitably engaged in the manufacture of adulterated foods, habit-producing nostrums and other impositions on the people—to the extent of hundreds of millions of dollars annually—and express our sympathy for the well-meaning men and women who have been misled and worked into hysterics by the monstrously wicked misrepresentations of a corrupt and noisy band of

conspirators who are being used as blind instruments to enable them to continue to defraud and debauch the American people.

Medical science is advancing, especially on its life-saving side, with a rapidity unknown to any other branch of human knowledge. It is known of all men that our members in every community in the United States are unselfishly working day and night, instructing the people how to prevent tuberculosis, typhoid fever and the other diseases from which physicians earn their livelihood. Therefore, we welcome and will wear as a badge of honor the slanders of these unholy interests and their hirelings.

These resolutions were later on unanimously adopted by a rising vote.

T. D. Tuttle, Montana, moved the appointment of a committee to prepare suitable resolutions in regard to the death of Dr. Ricketts, after which the House of Delegates adjourned until Wednesday afternoon.

At the Wednesday session, Rosalie Slaughter Morton, New York, was granted the privilege of the floor to present the report of the Public Health Education Committee. The Reference Committee on Legislation and Political Action commended that Dr. Reed's resignation be accepted with an expression of appreciation of his untiring, loyal and faithful services. The Reference Committee on Hygiene and Public Health commended the work of THE JOURNAL in the direction of a sane Fourth of July. The Reference Committee on Reports of Officers submitted a supplementary report on Dr. McCormack's work, endorsing his recommendation of the appointment of a special committee of seven charged with the framing of a bill for a National Department of Health to be presented to the next session of Congress. Following the adoption of this report, Dr. Guthrie, Pennsylvania, moved the adoption of the resolution presented by Dr. McCormack. This motion was unanimously carried. The Committee on Awards recommended that a gold medal be given to Claude A. Smith, of Atlanta, Ga., for an exhibit of experimental researches on hookworm disease and that certificates of honor be awarded to the following exhibitors: University of Minnesota; St. Louis University; St. Mary's Hospital, Rochester, Minn.; St. Louis City Hospital; Indianapolis Department of Public Health; University of Michigan; Dr. Howwink, St. Louis; Special Committee on Prevention of Blindness, New York; Northwestern University, Chicago; St. Louis Medical History Club. The following resolutions were then presented and adopted regarding the death of H. T. Ricketts:

WHEREAS, Howard Taylor Ricketts, a member of the American Medical Association, lost his life on May 3, 1910, from typhus fever, contracted

while engaged in an investigation of that disease in the City of Mexico; and

WHEREAS, He sacrificed himself in the study of a preventable disease and in the interest of the health and lives of the human race; and

WHEREAS, His masterly attainments as a scientific worker in this and other fields rendered his life of inestimable worth to the medical profession and the world at large; therefore be it

Resolved, That the American Medical Association, in convention assembled, herewith express its high appreciation of the ideals, the efforts and the achievements of this brilliant investigator, and its deep sorrow at the loss of a most brilliant investigator, and its deep sorrow at the loss of a most valued and cherished member; and

Resolved, That we herewith express our sorrow in the death of Dr. Conneffe, of Ohio, who lost his life as a result of infection with typhus fever while working with Dr. Ricketts in Mexico City; and

Resolved, That these resolutions be spread on the minutes of this Association and published in The Journal.

After the election of a number of associate members and the presentation of miscellaneous resolutions, which were referred to appropriate committees, the House adjourned until Thursday morning.

A special meeting of the House was held on Thursday morning to consider the report of the Reference Committee on Amendments to the Constitution and By-Laws. A large number of amendments, consisting mainly of verbal modifications, were adopted. The last meeting of the House of Delegates was held on Thursday afternoon, the election of officers being the first order of business. The following officers were elected: President, John B. Murphy, Chicago; First Vice President, E. E. Montgomery, Philadelphia; Second Vice President, R. C. Coffey, Portland, Ore.; Third Vice President, W. G. Moore, St. Louis; Fourth Vice President, H. L. E. Johnson, Washington, D. C.

When nominations for general secretary were called for, I. G. Chase, of Texas, nominated Dr. Simmons for re-election in a speech which invoked repeated rounds of applause. In spite of the fact that his resignation had been presented and accepted it was evident that the House of Delegates was determined to re-elect him. After a large number of delegates from different states had expressed their views, Dr. Simmons was unanimously re-elected. Frank Billings was nominated for re-election as treasurer by the Board of Trustees and was elected. The following trustees were then elected to serve until 1913: W. W. Grant, Denver, Colo. (re-elected); G. E. Cantrell, Greenville, Texas (re-elected); Frank J. Lutz, St. Louis, Mo. The president appointed the following as members of standing committees,

the appointments being confirmed by the House of Delegates:

The Council on Medical Education—George Dock, St. Louis, to succeed E. E. Southard, to serve until 1915.

Council on Health and Public Instruction—H. M. Bracken, Minn., to represent public health; W. B. Cannon, Boston, to represent defense of medical research; Henry B. Favill, Chicago, to represent public instruction; J. H. McCormack, Bowling Green, Ky., to represent organization, and W. C. Woodward, Washington, D. C., to represent legislation.

The Reference Committee on Sections and Section Work recommended the election to honorary membership of Alfred Saenger, Hamburg, Germany, J. Herbert Parsons, F. R. C. S., London, Eng., and James H. Honan, Berlin. The Board of Trustees reported regarding the publication of special journals on surgery and pediatrics and after extended discussion the matter was referred back to the Board with full power to act.

Invitations for 1911 were presented from Los Angeles, Cal., and Buffalo, N. Y., and on ballot, Los Angeles was chosen, 61 to 58.

The Reference Committee on Hygiene and Public Health presented a report condemning the multiplication of optometry boards and the appointment of non-medical and unqualified persons thereon, recommending the formation of a committee on the prevention of blindness and authorizing the appointment of a committee to co-operate with the Department of Commerce and Labor with a view to establishing proper visual standards and tests for pilots. Following the adoption of resolutions of thanks to the Missouri State Medical Association, the St. Louis Medical Society, Governor Hadley, Dr. Dorsett and his local committee of arrangements, the House of Delegates adjourned sine die.

The attendance of the House of Delegates was large, 133 delegates being registered. An enormous amount of legislative work was done, the bulk of which was transacted in committees. The revision of the constitution and by-laws and the reorganization of the standing committees will greatly strengthen the work of the Association and increase the possibilities for improved work. Taken as a whole, it was one of the most important sessions which the Association has held and the prospects for the coming year are better than ever before.

The tension on the sutures after operation for an epigastric hernia may be relieved by placing a pillow under the knees and propping the patient up in bed.—Surgical Suggestions.

VIENNA LETTER.

C. M. SHEPARD, M. D.,

Orthopedist to Grant Hospital, Columbus.

If you wish to perfect your technique in some line of surgery, there is no better place for the satisfaction of this desire than the anatomical rooms of the university. For a small fee, and a privilege secured through the man under whom you may be working, you may have all the fresh material desired for professional work. Most of the fee goes to the *diener*, who keeps things in order for you. Your instructor will work with you; a regulation of the place demands this. With now and then an exception, all the material which you have in the evening will be prepared and buried the next day. Hence, it is a case of "face, hands and feet" again. The *diener* will keep close watch of this part; all the rest is yours, to do with as you wish. The privilege is extended by the university to the instructors and their assistants especially, but is one that is being constantly bought by ambitious Americans. When in Austria if you see anything you want—just buy it. It is but a matter of money.

Separate and apart from the anatomical rooms is the anatomical department of the university. This is a very large stone structure, and is rather modern. Tandler holds forth here, and it is to him that we go for our dissection and instruction in anatomy. The vastness of this department is beyond description. Americans, as a rule, arrange for their courses, specifying the regions desired. The ear, eye, nose and throat men want the head, of course. The abdominal surgeons and genito-urinary fellows want their particular fields, and they get them from Tandler in a manner that is "direct from the shoulder." Preserved specimens of the normal as well as the pathological conditions, illustrated by models in wax, pictures and drawings, illuminate the lectures. He never fails to point out mistakes of other anatomists, and he never fails to clinch his point with many specimens. He reminds one much of the constant jar going on between surgeons, the only difference being that Tandler has his proof in hand all the time. He takes delight in accounting his experience with this surgeon and with that surgeon. Especially is this true when he is dealing with some very important structure, the severing of which might or would cause death. In this connection he would say: "And de surgeon he haaf cutted his ting, and de patient he haaf *been*." He is called by Eiselberg, Hochenegg, Zuckerkandl, Silbermark, and others quite frequently when they have a difficult operation, such as the removal of a pituitary body.

They like him to stand at their elbows, to tell them where they can, and where they cannot cut. It is little wonder that he is able to relate moments when "de patient he haaf been." Among the many interesting courses given by Tandler is the one on the sympathetic nervous system. His course on the anatomy of the neck, however, is by far the most interesting from a surgical standpoint. This alone is well worth a stay in Vienna.

The preparation of bodies for dissection is not carried to the perfection in Vienna that it is in the states. I have worked on much better material in the Jefferson of Philadelphia, issued for the usual dissection, than I found in the anatomical depart of the University of Vienna in the special preparations. This is probably due to the great amount of dissecting material at hand. As soon as a subject becomes spoiled it is replaced by another. However, the preservation of specimens is carried to a great point of perfection. Much importance is attached to the reproduction of anatomical dissections and specimens in wax. There is a fully equipped department for this, and all regular students of the university are eligible, and are required to take the course. It is from this source that all the models used in the surgical divisions, as well as those of the special branches, are obtained. I am satisfied that the introduction of such methods into our own colleges would materially aid the students in their anatomical studies.

In recent years very few men have visited Vienna without going to see Professor Adolph Lorenz. His orthopedic ambulatorium is in the Allgemeines Krankenhaus, and is one of the busiest places imaginable. On account of the great prevalence of bone and joint tuberculosis, this clinic is visited by vast numbers in the course of a year. It is nothing unusual to have from fifty to seventy-five patients report in one day. All sorts of diseases and deformities of limbs and joints gravitate to this clinic, because the name "Lorenz" is an Austrian household word that signifies close relation to the supernatural. Dr. Will Mayo, in a recent articles, speaks of the prominent English surgeon, Robert Jones, of Liverpool, as being an "Orthopedic Wizard." I am prepared to back this statement, but in addition must speak of Lorenz as the "Continental Wizard of Orthopedics."

He comes to the clinic every morning at 9 o'clock and remains until all the new cases have been diagnosed. He then goes to his private office to look after special patients. Visiting physicians are directed to be at the ambulatorium at 9 a. m. There they are received by the professor while in the midst of his work. He is very

gracious, and you are at once impressed by his childlike simplicity, which but increases your idea of his greatness. If you should happen to have a card of introduction from some American orthopedist whom he knows, you will receive added courtesy and attention. You will find him surrounded by his assistants and numbers of patients, giving particular attention to diagnosis and course of treatment of some disease or deformity. He will stop, however, and greet you with a profound bow and kindly smile, and will no doubt recall the name of some one whom you both know. He asked me solicitously about my preceptor, Dr. H. Augustus Wilson, of Philadelphia, and spoke at some length of his visit with Dr. Wilson when in America. He then returned to the case at hand, apologizing for his English (which was excellent, I thought), and proceeded from the point where I had interrupted. Professor Lorenz is a fine physical specimen, six feet two or three inches, well muscled, perfectly preserved, and straight as an arrow.

The home life and the food of the peasants and poorer classes in the cities, with lack of sufficient sunshine, are the cause of the great prevalence of bone and joint tuberculosis. It is apparently unlimited, and one wonders if there are any really healthy persons anywhere. Rickets, known throughout the Continent as the "English sickness," is seen every day. Rickety backs and legs are not passed over in this clinic as being beyond treatment. Where possible, the bones are straightened, and the backs are manipulated until they are either straight or benefited to the fullest possible extent. Knock-knees and bow-legs are corrected, and the patients made to walk like human beings. Little's disease (a term more often used than that by which we designate it), is quite common. These cases are tenotomized and myotomized and put up in plaster, and later the patients are taught to walk with surprisingly satisfactory results.

Wry necks are corrected along the same lines that would be followed in the treatment of club feet. The method of tenotomy in the correction of this trouble is quite unique, in that the tenotome is inserted directly over the great vessels of the neck. The trick is to make a clean tenotomy without opening the arteries or veins. Jones remarks that "it is the most dangerous method possible to follow," but when, in the course of three or four weeks, one sees the absolutely perfect results, it seems worth trying. Perhaps it is not so dangerous after all, if we only know how to do it. No accident, due to this operation, has ever occurred in this clinic,

and the results warrant no change in the technique.

Minor troubles, such as club foot and flat foot, are daily affairs. The deformity is over-corrected, put up in plaster for a sufficient length of time, and then the after-treatment completes the cure. It is all done by moulding and manipulating with the hands. Rigid feet react quickly to these methods.

From four to five assistants are kept busy with this work the year around. These are the regular official assistants. Then there are specialists present from all parts of the world, working all the time. They are coming and going constantly, so that at no time is the clinic quite free from "foreign invasion." My associates for a while were a Swede, a Japanese, Russian, an Italian, and an American from Brazil, but he was an American just the same. My friend, the Swede, was a professor from Stockholm, who had recently been appointed to take charge of a new Orthopedic hospital, and in order to have him up to date he was sent to work with Lorenz for a few months, with full pay and expenses during the time he was in Vienna. I do not imagine that he had to pay duty on the microscopical slides which he took home with him. It is truly wonderful how far behind the times these old countries are when compared with our own modern "stand and deliver" country.

As soon as Professor Lorenz has seen all the new cases, and given his attention to other matters at hand, he takes his departure for the day, and then the real work begins. Everybody falls to, and the cases are attended to as rapidly as consistent with good work. All the operations in this clinic are practically bloodless, outside of tenotomies and punctures of abscesses now and then. Lorenz does not like blood, and will get away whenever he can from a small tenotomy. On the other hand we will work long and vigorously with a hip that requires manipulation, and will fracture the neck in cases of old coxa-vara in order to obtain the position desired. Such a case will then be put up in plaster, and held perfectly immobilized for weeks or months, if necessary, to secure results. He is now working out new methods on coxa-vara, and has just recently produced a paper before the Vienna medical profession that has created no end of discussion and wonderment. Since his perfection, to the complete satisfaction of the surgical world, of the treatment of congenital hip joint disease, he has taken up the coxa-vara idea with the hope that something can be done to overcome the difficulty without resorting to bloody surgery.

A girl of twenty-five, with a congenital dislo-

cated hip, untreated and quite lame, came a long distance to see Lorenz. After examination she was rejected as being too old for treatment. She did not return home, however, but every day would come to the clinic and watch her chance to throw herself at the feet of the professor and beg him to operate her. It was most pitiful—the girl in tears and the good professor at his wits' end, endeavoring to make her understand that she was too old to be helped. Her case led to long and earnest consideration, and it was plain to be seen that the heart of the professor was being greatly touched. One morning, in the midst of a clinic, the girl appeared and precipitated herself, crutches and all, with considerable noise and crying, at the feet of her victim. He surrendered. She was operated upon in a day or so, and the head was brought into very good position, even much better than was to be expected. Now as it is always the unexpected that happens, this patient developed a bad attack of hysterics, and picked and tore at her cast until finally the head resumed its old position. Of course, the case was disappointing all the way through, and to everybody's surprise the girl threatened to bring suit against the professor for damages. It was a great muddle, but passed away without any legal complications, and I heaved a sigh of satisfaction that the United States was not the only place where physicians meet such ingratitude.

"In the thirteen years I have taught in Michigan I have not used alcohol in the treatment of disease in a routine way. Even alcoholic preparations, such as tinctures, have been used in very rare instances. I have occasion to speak on this subject every year to about two hundred students. My reasons for taking this stand are chiefly medical, though I am heartily in sympathy with the ethical and moral phases of the temperance movement."—Dr. George Dock, Professor of Medicine, University of Michigan Medical College.

Be very careful in the prognosis of ulcerations on the sole of the foot in diabetic or tabetic patients, no matter how small or trifling the ulceration may be. They persist for long periods and may never heal.—Surgical Suggestions.

Very often the unskillful treatment of a fracture is worse than no treatment at all. Serious results may result from the neglect of small details no less than from the violation of important principles.—Surgical Suggestions.

CORRESPONDENCE

Rawson, O., July 1, 1910.

To the Editor: Some time ago I read an editorial from the March number of *THE JOURNAL* showing the caliber of the so-called drugless healers.

We have a "something" up here in this part of Ohio whom everybody knows as the "Dutch Doctor." His name has been the subject for discussion at the Sunday schools, prayer meetings, Aid Societies, etc., for the past six months.

Some one in the past has said, "All the people can be fooled some of the time, and some of the people all the time, but you can't fool all the people all the time."

This statement becomes a demonstrated fact when we know that our twentieth century intelligence is being insulted by a quasi-pseudo-foot-holding sect, chartered under the name of "Fraud and Deception," who are authorized to shun all intelligence and deal wholly with superstition and ignorance.

The High Priest of this new sect hails from Pandora, Ohio. He plays upon the superstition of his flock by taking hold of their foot, thus locating all their aches and pains and diagnosing all diseases.

Works of this kind appeal to all the intelligent and thinking people as fraud and deception of the lowest order, and it is the duty of all honest and law-obeying citizens to protect the laity from an impostor of this kind, who is using his cunning deception for revenue only; for each victim that calls is supposed to leave 50 cents in his keeping.

When will good common sense revolt against this ancient relic of superstition, this insult to intelligence and reason, this sure and constant source of insanity?

We all know the proper treatment of any disease depends upon a correct diagnosis. This is often difficult with the best trained and most scientific, yet there are some in their dense ignorance who submit their case to a *quack* of this kind for a diagnosis merely by holding the victim's foot, and then return home as much relieved as if they had consulted the Great Physician from Galilee.

While holding their foot the Dutch Doctor tells all their ailments and tells them to eat and drink promiscuously of blue mass, pumpkin seeds, rhubarb and dandelion tea; eat an onion top and all, beginning at top first, etc; also some are instructed to get in and out of bed backwards; pass a glass of water from hand to hand, then throw over the left shoulder, etc., etc.

Some 400 years the peerless Bard of Avon was constrained to make this original remark, "What fools these mortals be." Even today we know this is a demonstrated truth.

Yours truly and respectfully,

H. J. Powell, M. D.

Washington, D. C., June 25, 1910.

J. H. J. Upham, M. D., Ohio State Medical Association, Columbus, Ohio:

Dear Sir—I am in receipt of your letter of the 22d, embodying resolutions adopted by the Ohio State Medical Association in support of Senator Owen's bill to establish a Department of Public Health, and in reply beg to assure you that this subject has been and is receiving my most careful consideration. Very truly yours,

Nicholas Longworth.

Columbus, Ohio, June 18, 1910.

J. H. J. Upham, Secretary of The Ohio State Medical Association, City:

My Dear Doctor: I am in receipt of your favor relative to the bill introduced by Senator Owen looking to the creation of a National Department of Health. In reply I would say that I am entirely familiar with this bill and in hearty sympathy with legislation which will accomplish the object sought by it. I believe the creation of such a department would work great benefit to the general public, and assure you that I will gladly do all in my power to further such legislation. With kind personal regards, I am,

Very truly yours,

E. L. Taylor, Jr.

Washington, D. C., June 25, 1910.

J. H. J. Upham, Columbus, Ohio:

My Dear Doctor—I am in receipt of your letter of the 22d instant, in reference to the organization of a Public Health Department. I wish to state that some weeks ago I called the attention of each of the physicians of my district to this matter, and sent them a copy of the Owen and Mann bills. In response to that letter and the enclosed bills I have received quite a number of replies, and almost without exception they have endorsed the Owen bill.

I thank you for the resolutions of the State Medical Association. Sincerely yours,

M. R. Denver.

Washington, D. C., June 24, 1910.

J. H. J. Upham, care Ohio State Medical Association, Columbus, Ohio:

My Dear Doctor—I beg to acknowledge the

receipt of your letter of the 22d in relation to Senate Bill No. 6049, and assure you the same will have careful consideration.

Yours very truly,

James W. Cox.

Washington, D. C., June 24, 1910.

J. H. J. Upham, Secretary Ohio State Medical Association, Columbus, Ohio:

Dear Sir—Senator Burton has your letter dated June 22, transmitting a copy of the resolution of the Ohio State Medical Association, endorsing the bill, S. 6049, providing for the creation of the Department of Health. The senator is inclined to favor the proposal to combine the existing national health bureaus and agencies into one organization which could do more effective work and with greater economy, but he cannot see his way clear to favor the immediate creation of a Department of Health with a cabinet officer at its head, although this may come in time.

A very large number of communications relative to this measure have been received, many of which strenuously oppose it. I do not believe that the bill can be reached during this session of congress. Very respectfully,

Roger A. Selby, Secretary.

Defiance, Ohio, June 27, 1910.

J. H. J. Upham, Secretary Ohio State Medical Association, Columbus, Ohio:

My Dear Doctor—In reply to your esteemed favor of the twenty-fifth instant, addressed to me at Washington, D. C., received today, relative to Senate Bill No. 6049, would say that I am heartily in favor of the above measure and will give the matter my best and careful attention when it comes up in the House for consideration.

Trusting that I may be able to serve you and your Association further in the future, and assuring you of my very kindest interest, I remain,

Very truly yours,

T. T. Ansberry.

June 29, 1910.

Dr. J. H. J. Upham, Secretary Ohio State Medical Association, Columbus, Ohio:

My Dear Sir—Availing myself of the first opportunity to acknowledge your esteemed favor, transmitting copy of resolutions adopted by the Ohio State Medical Association at its recent annual meeting, as you are of course aware, the subject of the establishment of a Federal Department of Public Health was not reached for consideration at the last session.

Your letter, however, has been carefully placed

where it will be readily available for reference should the matter be taken up for consideration at the next session of congress, and assuring you I am glad to hear from you whenever you feel there is occasion to write me, or there is any service in my power to render, I extend most cordial regards, and remain,

Very truly yours,

Charles Dick.

BOOK REVIEWS.

(Concluded from page 383)

and also specific and individual for private patients. It is a pleasure to commend this book to our readers.

SURGICAL AFTER-TREATMENT. By L. R. G. Crandon, A. M., M. D., Assistant in Surgery at Harvard Medical School. Octavo of 803 pages, with 265 original illustrations. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$6.00 net; half morocco, \$7.50 net.

It is a real pleasure to turn to this work and receive sound advice and the very latest recognized methods of post-operative therapy. It contains everything one might wish to know in dealing with a surgical patient—the meeting of emergencies, surgical technique, surgical convalescence, etc. The chapters on vaccine therapy, specific sera, immunization by inoculation add to the value of the work.

FOUNDERS WEEK MEMORIAL VOLUME, containing an account of the 225th anniversary of the founding of the city of Philadelphia, and histories of its principal scientific institutions, medical colleges, hospitals, etc. Edited by Frederick P. Henry, M. D. Published by the City of Philadelphia, in commemoration of the 225th anniversary of its founding. Philadelphia, Pa., 1909.

This is indeed a monumental work and one full of interest to the medical profession. In it Philadelphia establishes its claim as a great medical center and shows its close connection with all departments of medical progress since the earliest days.

The editor and his associates have spared no efforts to present a volume worthy of their great city, and have been eminently successful. From an historical point of view alone the data herein made available is invaluable, and the presentation of the present status will make it still more so as a work of reference in the future. It is handsomely mounted, liberally illustrated with many uncommon and valuable cuts.

DIET IN HEALTH AND DISEASE. By Julius Friedenwald, M. D., Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and John Ruhrah, M. D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Third revised edition. Octavo of 764 pages. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$4.00; half morocco, \$5.50 net.

It is a pleasure to recommend this work to our readers. The first and second editions established its value, which, however, has been increased by a thorough revision and addition of much new material. It is one of the most satisfactory books we have found on the subject.

THE PATHOLOGY OF THE LIVING AND OTHER ESSAYS. By B. G. A. Moynihan, M. S. (London), F. R. C. S., Honorary Surgeon to Leeds General Infirmary; Professor of Clinical Surgery at the University of Leeds, England. 12mo of 260 pages. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$2.00 net.

Many of the essays in the above named work have appeared in this country and are widely and favorably known. Their collection and presentation in this attractive form will be welcomed by a large circle of admirers.

The essays are all on practical subjects, the language is clear and forcible, and often valuable points are brought out and emphasized by illustrative cases drawn from the author's wide experience.

SERUM DIAGNOSIS OF SYPHILIS AND THE BUTYRIC ACID TEST FOR SYPHILIS. By Hideyo Noguchi, M. D., M. S., Assoc. Member of the Rockefeller Institute of Medical Research, N. Y. Fourteen illustrations. J. B. Lippincott, Philadelphia and London.

The author first considers the principles of serum hemolysis so as to prepare the way for the proper understanding of the Wassermann reaction and his own modification.

The technic of the Wassermann reaction is given in full, together with that of the author's own method, so that the work may be used by the laboratorian for the actual tests described.

The manner of treating the subject together with the illustrations and the glossary render it also readable and easy of comprehension to the student and practitioner.

DUODENAL ULCER. By B. G. A. Moynihan, M. S. (Lond.), F. R. C. S., Leeds. Illustrated. W. B. Saunders Company, Philadelphia and London, 1910.

This is a timely work on a subject which is exciting much interest at the present time, and should greatly help in the recognition of a condi-

tion which, while it is being diagnosed more frequently at present, is still too often being overlooked. The etiology, history and pathology of the disease are first thoroughly considered; the symptomatology and diagnosis follow lucidly and consisely presented after which in logical sequence is given the surgical treatment, with an appendix giving detailed accounts of 186 cases operated upon.

It is well mounted, handsomely illustrated, and a welcome addition to our literature.

A PRACTICAL STUDY OF MALARIA. By William H. Deaderick, M. D., Member American Society of Tropical Medicine; Fellow London Society of Tropical Medicine and Hygiene. Octavo of 402 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$4.50 net; half morocco, \$6.00 net.

This work of some 400 pages is devoted entirely to a comprehensive view of malaria, in all its phases, but is essentially practical and devoted to the needs of the general practitioner. It should be in the hands of all physicians who practice in malarial districts at least. The history and geographical distribution of the disease are first given in detail followed by a thorough discussion of the parasite and the role of the mosquito. The description of the parthogenetic cycle is of special interest as the only rational explanation of latency and relapse, and marking the first appearance of this explanation in the English language.

INTERNATIONAL CLINICS, VOLS. I AND II. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, Pa. J. B. Lippincott Co., Philadelphia, 1910.

Vols. I and II, Twentieth Series. These two volumes contain the progressive character of their predecessors by embracing articles on subjects of special interest of the day. The authors are well known and well selected for their fitness for the subjects allotted. In Vol. I, the three special articles by respectively, Homer, Swift, Hideyo, Noguchi and B. Sachs on the serum diagnosis of syphilis should be mentioned particularly.

Pellagra, Symptomatology by Watson, and Treatment by King, is well considered; the illustrations are very good. The first article is the more satisfactory, the second sounding more or less perfunctory.

Emil Beck contributes a continued report of his bismuth paste injections illustrated with excellent Roentgenograms.

Volume II covers a wide range of subjects. Tyson writes on the treatment of cardio-vascular disease in his usual satisfactory manner, and other medical subjects by Benedict, Dopter, Allyn,

Cumston, Frank Billings, Walsh, and Klein are of general interest.

Three articles on cancer follow, of which the first by McConnell is particularly of interest in that it chronicles to date the cases of spontaneous cures of cancers.

Drainage of the ventricles, irrigation and injection of Flexner serum by Louis Fisher is an ac-

count of the authors experience with some desperate cases of cerebrospinal meningitis, with favorable results from the above measures.

Articles of general interest on obstetrics, dermatology, pediatrics, and neurology are also present. Under miscellaneous topics will be found an excellent and entertaining paper on *Book Plates of Physicians and Their Hobbies*, by R. G. Curtin.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.

THE FUNCTIONS OF THE PITUITARY BODY.

With the advent of extracts of the pituitary body and its use for combating surgical shock one of normal curiosity will ask certain questions. Answers to most of them will be found in the following summary of an article by H. Cushing, which gives briefly our present understanding of this body:

"The pituitary body is a double organ in the sense that the secretion of its anterior and solidly epithelial portion discharges into the blood sinuses which traverse this part of the gland; whereas the hyaline substance, apparently the product of secretion from the epithelial investment of the posterior lobe, enters the cerebrospinal space by way of channels in the *pars nervosa*. Though possessing a physiologically active principle, as shown by the results of injections, the secretion of the posterior lobe does not seem to be so vitally essential to physiologic equilibrium as that of the anterior lobe, the total removal of which leads to death with a peculiar train of symptoms which set in at an early date in the adult and after a longer interval in younger animals. Alterations in the gland, which often ultimately assume the character of a malignant growth (adenoma) but which presumably at least in their earlier stages, represent an hypertrophy, are common in clinical conditions of overgrowth (acromegaly and gigantism), and certain feeding experiments lend support to the view that these clinical states represent the consequence of hyperactivity of the *pars anterior*. Partial removals of the anterior lobe usually lead to obvious disturbances of metabolism often accompanied by adiposity, and in the young by a persistence of infantilism, or in adults by a tendency to lose the secondary sexual characteristics. Cushing regards it as probable that certain of the symptoms known to accompany hypophyseal disease may be consequent on a secondary change in

other glands which follows the primary lesion of the hypophysis. These changes are seemingly more outspoken and more widespread after a lesion of the pituitary body than after a corresponding lesion of any other individual member of the group of the ductless glands, and in view of its unusually well-protected position one might have conjectured that it must represent a vitally important organ."—Abstract from J. A. M. A. of original in *Amer. Jour. Med. Sci.*, April, 1910.

THE SIGNIFICANCE OF LEUCORRHEA.

Goelet (*Med. Record*, May 7, 1910, p. 768) gives a comprehensive review of this important but too often neglected subject. In childhood before puberty the following are the common causes of the discharge. Gonococci usually contracted from uncleanly nurses, soiled towels or clothes, may be the cause. Simple vaginitis is not infrequently due to the use of irritating soaps. It may be due to the constant irritation of the genitals from the habit of handling them which some children acquire. Again foreign bodies introduced into the vagina may be the cause of irritation. Worms in the rectum as well as in the vagina produce vaginitis. But by far the greater cause is the gonococcus acquired most frequently in an innocent manner. Microscopic examination should always be made to determine the infecting organism.

In young women before marriage the foregoing causes operate as well as the following. It is well for the physician "never to think any female patient with a vaginal discharge above suspicion." The use of tact will often solve such problems. Not infrequently the gonococci may be demonstrated on the soiled clothing when examination has been refused. Specific vaginal discharge may arise by indirect infection, as from unclean towels, infected clothing, common bathing suits, nozzle of a syringe (for little care is taken to have this instrument perfectly clean before using) and in

other similar ways, but direct infection is far more frequent. There are, however, other causes of discharge.

"For instance masturbation is a frequent cause of leucorrhea as is also sexual excitement from intimate association of sexes, even when it does not overstep the customary limitations of polite society. It may result also from a catarrhal endometritis, or uterine displacements, or from conditions that cause dysmenorrhea; constipation or any other conditions that produces pelvic congestion, pelvic tumors, etc. Leucorrhea is also observed in anemic subjects and may occur also as the result of hyperacidity."

Unfortunately women are too often told that leucorrhea is usual after marriage. Though some times of no moment, if constant it should always be considered abnormal.

"Vaginal discharge in recently married women always demands prompt attention, for unfortunately it is not unusual for young men to marry while they still have a gleet or when they have not been pronounced cured of a gonorrhea. It must be borne in mind that absence of discharge is not evidence of cure, for this disease often lurks in the prostrate long after all visible evidence of discharge has disappeared. I once did an abdominal section on the wife of a physician whose pelvic organs presented unmistakable evidence of gonorrheal invasion. After seeing the condition the doctor asked to have his prostate examined, stating that he had contracted the disease sixteen years before marriage and believed himself cured. Examination of his prostatic secretion revealed gonococci.

"It is the duty of the physician to educate his patients to a proper appreciation of the danger to the young wife who marries a man that has previously had gonorrhea. I feel so strongly upon this point that I think an enforced examination and a clean bill of health from a competent specialist should be demanded before a man is permitted to marry. If fathers and mothers of young women could be made to appreciate its importance it would not be long before such a demand would become a custom; then the work of the gynecologist would be greatly curtailed."

Of equal importance is the knowledge that every man who contracts gonorrhea after marriage should not cohabit until he is cured. Unfortunately too few men have any but a vague idea of the importance of this fact.

"It is most unfortunate that the belief is so universal, not only with the public but also with many physicians, that gonorrheal infection in

women must always manifest itself by a burning upon urination and a profuse purulent discharge; in fact, that there must always be a primary urethritis and vaginitis. Some authorities contend that the urethra is the most frequent location of the primary infection in women.

"On the contrary, gonorrheal infection of the cervix is very much more frequent than is generally realized, even by the physician, and frequently is unsuspected because there is not always a profuse or suspicious discharge. And these are the most dangerous cases because they are not suspected. The infection is lurking in the glands of the cervix and is not manifest even in the discharge in some cases except under some unusual excitement or irritation that causes the glands to throw off the secretion in unusual quantity. But it is always possible to make a correct diagnosis in such cases by examination of the secretion after intentionally provoked irritation."

Other forms of infection encountered in women are the streptococcus and staphylococcus, alone or together. These are only a little less harmful than the gonococcus. "The manner of their introduction into the vagina is not easily determined, but probably the most frequent means is by the nozzle of the syringe which is never clean. It is kicked around the floor, and it would seem that every effort is made to insure its infection. Even the inside of the fountain syringe is a fruitful source of infection, for the rectal nozzle, after it has been used, is invariably inserted into the mouth of the bag, as is also the vaginal nozzle.

"Women who are guilty of these unclean habits are really not to blame, for they have not been warned of their danger.

"Anything that causes congestion of the pelvic organs may produce a leucorrhea; for instance, constipation, an inactive and congested liver, intestinal indigestion, tight lacing, prolapse of the kidneys, by interfering with the return circulation through the ovarian veins, unusual sexual excitement, particularly when it is not relieved, sexual excesses, efforts to prevent conception, etc."

Carcinoma of the cervix or body of the uterus must always be thought of in cases where there is a foul leucorrhea. A frequent cause is the use of irritating substances, soap or bichloride, in the vaginal douche. Though a slight moisture is often present about the vulvar orifice and is not significant and requires no attention, if an apparently normal secretion is persistent or sufficiently profuse to produce inconvenience it

would be safer for the woman to consult a physician and to let him decide if it requires attention."

In women after the menopause "by far the most frequent and serious causes of discharge are senile endometritis, because it leads to constant ill health, or chronic invalidism and premature ageing; and cancer, because it endangers

the life of the patient, and if it progresses too far before it is discovered, means death within a very short time."

Certainly "leucorrhea" merits more than neglect or passing notice from the attending physician. Examination, and determination of the cause of every vaginal discharge should be insisted upon.

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKee, M. D., Collaborator.

The Cincinnati Obstetrical Society met at the residence of J. C. Cadwallader, Norwood, June 23, 1910. The paper of the evening was by Henry L. Woodward, on "The Development of Sex Organs."

The Adams County Medical Society met at West Union on June 8, 1910. The annual election of officers was held, resulting as follows: President, W. B. Loney, West Union; Vice President, O. B. Kirkpatrick, Cherry Fork; Secretary-Treasurer, O. T. Sproull, West Union.

Resolutions of respect in memory of members recently deceased were passed. The members were Drs. R. W. Purdy, Arthur Noble, R. A. Stephenson, W. K. Coleman.

T. H. Trout read a very interesting paper on "Reflex Neuroses." J. N. Ellison on "Obstructions in the Upper Air Passages," which proved to be one of the most valuable papers ever presented to the society. Dr. Ellison said in part:

Any general practitioner can deal with these cases instead of sending them to the specialist. That these cases are generally neglected much to the detriment of the prestige of physicians and their pocketbooks.

In the discussion O. E. McHenry inquired as to anesthesia. O. W. Robe insisted on the importance of a thorough examination, and related an instance of failure to get the left tonsil with an instrument he then took the finger to free it when he found that he could easily complete the operation with the finger alone. Dull children are often so because of adenoids. W. H. Morgan had observed eye symptoms in these cases. G. D. McCormick reported an interesting case of foreign body removed with a hairpin after failing with the forceps.

Dr. Ellison, in closing, said his paper had only been in line of general practice and not specialism. Gives anesthetic himself and has no trouble

No serious hemorrhage in 129 cases. Objection of mothers insignificant. Removes tonsils first when both tonsils and adenoids are to be removed.

O. E. McHenry, of Blue Creek, read a paper on "Epilepsy as I See It."

Abstract of a paper on "The Surgical Treatment of Trachoma," by S. C. Ayres, Cincinnati, read before the Cincinnati Academy of Medicine, May 2, 1910:

Some form of surgical treatment of trachoma has been in use for many years past. Scarification of the lids was succeeded by expression of the granulations and grattage or brossage. Then followed the excision of the retro-tarsal fold of the conjunctiva. More recently, almost complete excision of the palpebral conjunctiva up to the fornix has been adopted with excellent results. If the surgical method will cure this most intractable disease speedily as it seems to do it will be a great step forward. The object of scarification is to relieve the engorged blood vessels, to reduce the hyperaemia, to lessen the mechanical pressure of the upper lid upon the cornea, and to prepare the way for subsequent treatment. The scarification should be done under cocaine local anesthesia, a ten per cent solution having been brushed over the conjunctiva. The incisions should be through the conjunctiva only. It is not necessary to cut deep and it is important not to cut through the tarsus. Numerous incisions should be made over the conjunctiva, and bleeding encouraged by application of hot compresses. The best plan is to scarify a limited area, say one third, and then apply the hot compresses, and in this way go over the whole surface. The local application gives relief and takes away the sense of weight which is always present.

The Clermont County Medical Society met as the guests of Philip Kennedy, of Laurel, on June 29, 1910. Addresses were delivered by President T. A. Mitchell, M. D., of Owingsville; F. C.

Curry, Milford; J. T. Erdman, New Richmond; Wm. Scott, Loveland; J. B. Mott, Batavia; Edwin Ricketts, Cincinnati; E. S. McKee, Cincinnati; B. M. Ricketts, Cincinnati; F. H. Frohman, Marathon, and Philip Kennedy. Dr. Kennedy is a remarkable man eighty years of age and lives on his farm three or four miles from the Ohio river, and still practices medicine. The meeting was in honor of the eightieth year of Dr. Kennedy's life and the sixtieth year of his being in the practice of medicine. Though still in the practice he does not have to work much if he does not want to as his son and grandsons are doctors and with him. The day was one of June's most delightful and was thoroughly enjoyed by all.

At the celebration of the Clermont County Medical Society of the eightieth anniversary of the birth and the sixtieth year of the practice of medicine of Philip Kennedy, of Laurel, Clermont county, among the after dinner speeches E. S. McKee, of Cincinnati, was called on for one on "The Diagnosis of the Dead Beat." He said:

Ordinarily I would rather miss a dinner than make a speech, but this was an extraordinary dinner. Others who have known Dr. Kennedy longer and better than I have have honored him better than I could and in so doing have honored themselves. What can we learn from this remarkable life. There are twenty-five doctors here and I am sure that all of them together do not own as much land as does Dr. Kennedy, viz., 1400 acres. Verily, he hath saved that which he won in the pestilence. He has peace plenty and prosperity about him in his old age. He may practice if he wishes if not he has a doctor son and doctor grandson with him to take his place. What has the "Diagnosis of the Dead Beat" to do with Dr. Kennedy? I am sure he has met many of them and if he had all that was coming to him he would be able to add some more hundreds of acres to his farm. He must also have been able to diagnose them and to collect from them if any one could to have amassed this fortune.

Dee-lightful, as a day in June, in Clermont county, would it be if we had tests by which we could diagnose the dead beat as we have for other excreta. Dead beat is an Americanism and like many of them exceedingly expressive. A dead beat is one who never pays though often quite able to do so. He lives by evasions and is utterly dishonest. Dead, here, intensifies the meaning of the word beat. Shakespeare tells us, "Beat not the bones of the dead." Shakespeare was not always up on medicine but he had some advanced ideas on aetiology for he says: "I'll beat thee but I

should infect my hands." Perhaps he had sterilized his hands or hadn't his rubber gloves with him. Expert beats are spoken of as would beat Caesar himself. A dead beat in saloon parlance is said to consist of ginger, soda and whisky. A daisy dead beat is the euphonious name applied to a swindler of the first water. We of the medical profession on account of our often silly custom of giving credit to any and all at any and all times, day or night, are a peculiar prey to this gentry. There are classes of people who are seldom good pay unless they pay cash. There are exceptions, however, to all these. People who hold large blocks of unimproved real estate in rapidly growing western towns, undeveloped mining stock, great expectations of inheriting from aged relatives, should be looked upon with suspicion. Europeans will usually pay a small bill promptly when they first come over, but in time will learn the habit from their neighbors. The second generation will dress better and pay worse. The physiognomy of the dead beat is somewhat characteristic though not pathognomonic. He carries a bold, hail fellow, well met air of effrontery. We should if suspicious, lead him on to a recital of his former medical attendants, if numerous, and especially if criticized, get their addresses, communicate with them and find out how much they are out. One often saves himself by following this method. An utter lack of consideration for the doctor and for the rights of other patients should be regarded with suspicion. On the contrary if the patient carefully counts and when possible saves the doctor's visits, he intends to pay for the same though he may want them at a reduced rate. Morphine and cocaine fiends usually lose all honor and of course with the rest a willingness or desire to pay the doctor. You can bet they will beat you if you trust them. The person who owes you and is able to pay you, but will not, is seldom your friend—often your enemy. He will try to ease his conscience, if any, by making himself and his acquaintances believe that you have done his harm instead of good, and that you do not deserve your money. Doctors should post each other as to dead beats. Keep a black list, and by all means let your neighbors know so that they may protect themselves. We have all seen a dead beat patient pass from one to another doctor and even go around the second or third time beating his way about. Things are not always what they seem and we may be mistaken in our diagnosis of the dead beat ante-mortem as easily as that of any other infection. We sometimes get and sometimes lose a respectable fee where we least expect. The pathology of the dead beat is not well understood and these-

fore I would advise you when you have a typical case to see that you always get a post mortem when possible. The diagnosis of the dead beat is a scientific and necessary part of medicine. We should learn to diagnose and avoid him. Put our time and money to better use; watch the business side of medicine more carefully; accumulate a little surplus so that in later years we can take life more easily and in a different sense than in our early practice. Let this be our object:

A vine-clad home on a quiet street,
An easy chair and slippers feet,
A faithful wife, enough to eat,
And never a thought for the darned dead beat.

FOURTH DISTRICT

TODD DUNCAN, Collaborator.

The Fulton County Medical Society met in regular session, Wednesday, June 1, at 2:30 p. m., with the following program: "The Physiology of the Heart," P. S. Bishop, Delta; "Etiology and Pathology of Organic Heart Disease," W. E. Bordeaux, Tedrow; "Diagnosis of Heart Diseases," L. A. Levison, Toledo; "Treatment of Heart Disease," H. E. Braily, Swanton; "Cardiac Arrhythmia," W. A. Dickey, Toledo. A free discussion was opened by J. H. Miller. Following the program a splendid supper was served.

The general meeting of the Lucas County Medical Society on June 3 consisted of a symposium on gonorrhea, with papers as follows: "Microscopical Findings," Murray B. McGonigle; "Pathology," John P. Gardiner; "Treatment—Acute," Robert S. Walker; "Treatment—Chronic," Charles M. Harpster.

Dr. McGonigle briefly reviewed the technique of the laboratory method of examining smears, and how they should be taken from the vagina and deep urethra. If the patient were a male a smear from the urethra negative the vesicles should be examined. If necessary the bladder may be filled with water to facilitate manipulation, also a condom specimen will often reveal bacteria when none can be found in the usual way, or an instillation of silver nitrate may be used to stimulate latent cases. Too little attention is given to determining when a case has cleared up. Gonorrhea is not cured simply because the discharge has ceased, and the most thorough examination should be made before the patient is discharged.

Dr. Gardiner said in part: The stratified epithelium in the fossa navicularis seems to offer a certain resistance to the gonococcus, for here it is only found on the surface, but penetrates to

the deeper layers in other parts. It loosens the cells, produces mucoid degeneration and a general desquamation. The toxin irritates and inflames the mucous membrane, the vessels dilate and a constant stream of serum passes toward the surface.

Metschnikoffs theory of the leucocyte attacking the cocci seems probable but it is strange that they undergo no morphological change in their host. It is even claimed that the gonococci multiply within the cell body. If this is so it exerts no generative influence on the leucocyte.

At about the third week the cells remove all the cocci and the inflammation begins to subside, the cells begin to regenerate and show a curious metaplasia, a stratified epithelium develops in place of the columnar. The cocci are now found only on the surface and a cure follows unless an exacerbation takes place, when the whole process may recur. This may be frequent but each relapse is less severe. The mucous membrane gradually becomes indifferent to the toxin and responds less and less, consequently after several relapses the reaction is insufficient to eliminate all the cocci from the deeper structures, so they remain and provoke a proliferation of the connective tissue cells. This marks the onset of the chronic stage.

According to Oberlander the prostate is affected in two ways by the inflammation. The localized small cell infiltration with hyperemia of the mucous membrane called the soft infiltration, and the formation of fibrous connective tissue a sequence of the first, called hard infiltration. The latter forms stricture. The different changes may be observed through the urethroscope.

The complications of the disease were taken up in detail. In regard to epididymitis the danger of sterility was much greater when it was double, though here it does not always follow. According to Benzler the complete sterility in cases of single epididymitis is 35 per cent and of double 63 per cent.

The cystitis following gonorrhea rarely affects the whole bladder but is usually confined to the lower portion about the internal urethral orifice and associated with a co-existing inflammation of the posterior urethra.

Dr. Walker being absent, Dr. Keller, as chairman, read a short paper on the same subject, abstracted as follows: The patient should keep quiet and lie down as much as possible. Avoid all sexual and erotic excitement. Avoid producing pressure on the perineum, and warned of ophthalmia. In the diet, lessen the amount of meat, also highly seasoned and salty foods,

saucers, condiments, pickles, tomatoes and alcoholic drinks of all kinds.

A gonorrheal bag is the best dressing. Constriction by wrapping should be avoided, also cotton under the foreskin as it obstructs the flow of pus. A suspensory should be worn.

Internally: The bowels should be kept open. Alkalies should not be given as a routine measure as the diet will neutralize the acidity of the urine sufficiently. The urine should be slightly acid to inhibit the growth of other bacteria in the bladder.

Balsam copaiba, cubebs, sandalwood oil, kava-kava, etc., should not be used in early stages as they interfere with digestion, produce congestion of the kidneys and vessels of the scrotum; also they are depressing. They have a place after the acute stage; until then salol or urotropin may be used.

Local treatment by astringent injections is contra-indicated early as the bacteria are in the upper layers and leucocytes are removing them rapidly, consequently the vessels should not be constricted. The albuminous salts of silver should be used as they destroy the germ without injury to the tissue, and are not precipitated by salts or albumen. Suppurative prostatitis and acute epidymitis are the only local conditions which would call for a cessation of these injections which should increase in strength as tolerated. The disappearance of the bacteria marks the close of the acute stage, and astringent solutions should be substituted for the existing catarrh until shreds disappear from the urine.

Abstract of Dr. Harper's paper: Gonorrhea may be a general infection. The urethra passing through the prostate is affected by prostatic diseases. Chronic gonorrhea is really gonorrhea of the prostate and includes all its complications. The use of the urethroscope to determine the exact location of the lesion is essential. The lacunae of Morgagni, Cowper's glands or the glands of the bulbourethra are often cemented or obliterated. I have now a case of papillomata of the posterior urethra following gonorrhea which could only be diagnosed by the use of the urethroscope. Engorgement of the colliculus seminales may also be present and resist efforts toward cure until cauterized.

Dr. Gross, of Philadelphia, was the first American to call attention to chronic prostatitis of gonorrheal origin. The most frequent symptom is a clear, transparent discharge of mucus, consisting of crystals, mucous corpuscles, blood discs and epithelial cells, with or without pus cells. The epithelium should be differentiated from that of the vesicles by the shape and absence of

granules. In spermo-cystitis, with drainage sufficient to allow cellular elements in the urine, epithelia from the ejaculatory ducts and spermatozoa may be present. The premature emission of semen is evidence of the involvement of the deeper structures. The whole urethra may be granular and puffy with congestion enough to greatly narrow the lumen but not amounting to stricture.

Treatment depends on the part involved and consists of instillations through an anterior or posterior Kollman dilator, with dilation, massage of the prostate, irrigations, cauterization of the colliculus seminales with silver nitrate or actual cautery, internal and external urethrotomy, drainage of the prostate and vesicles, "vasostomy" for pus tubes in the male as suggested by Belfield, an astomosis of the vas deferens for sterility and many other procedures, which must be done for complications.

A short discussion on the modern methods of prophylaxis by education was given.

The discussion was opened by Dr. Levison: Gonorrhea is coming to be looked on as a general infection. Endocarditis is commonly due to it; also rheumatism. I saw a case of gonorrheal septicemia in a man aged twenty-four, who developed a heart infection, bullae over joints, hemorrhages from the mucous membranes and irregular temperature. It resulted in death and I was able to cultivate gonococci from the blood.

James Donnelly: I also saw a fatal case in a man aged thirty-five. He had fallen and sustained a fractured femur, later had chills and temperature of 104. He had gonorrhea and died of a general infection from it.

Dr. Smead asked Dr. Keller how strong the solution was made of the silver salts. Spoke of similarity of symptoms in appendicitis and inflammations of parts of the genital tract.

Dr. Wright asked Dr. Gardiner to review part of paper in reference to sterility, as he had a case of double epididymitis resulting in sterility and wanted to know the percentage.

Dr. Dachtler cited the frequency of joint lesions being due to gonorrhea.

Dr. McGonigle asked why alkalies were avoided in treatment.

Dr. Gardiner, in answer to Dr. Wright's question about sterility, said the percentage in single epididymitis was 32 per cent and in double 60 per cent. He agreed the gonococcus produced a variety of lesions and cited a case of dermatitis in which he was able to isolate this germ.

Dr. Keller said the solution of silver was 1 to 1000. In early cases wash with this solution then

inject some and tie in for several minutes. This may abort the course of the disease.

The Medical Section of the Academy of Medicine met on June 17 with the following program: "Diseases of the Stomach and Their Relation to Other Diseases," George H. Jones. Discussion opened by N. N. Sallume.

A meeting of the Surgical Section of the Academy of Medicine of Toledo and Lucas County was held on Friday evening, June 24, 1910, at 8:15 o'clock in the auditorium of the Young Men's Christian Association Building. The program was as follows: "The Anatomy and Practical Consideration of the Rectum," Paul Hohly; discussion opened by Chas. F. Tenney. "Treatment of Prolapse of the Rectum and of Internal Haemorrhoids," James A. Duncan; discussion opened by James Donnelly. "Colostomy for Rectal Stricture," P. J. Bidwell; discussion opened by G. M. Todd.

A meeting of the Medical Section of the Academy of Medicine of Toledo and Lucas County was held on Friday evening June 17, 1910, at 8:10 o'clock in the auditorium of the Young Men's Christian Association Building. The program was as follows: "Diseases of the Stomach and Their Relation to Other Diseases," George H. Jones. Discussion opened by N. N. Sallume.

FIFTH DISTRICT

H. G. SLOAN, M. D., Collaborator.

The Lorain County Medical Society held its regular meeting at Elyria City Hall, June 14, 1910, at 8 p. m. A general discussion of the annual Ohio State medical meeting and legislation was indulged in by Drs. S. S. Cox, Lorain; A. J. McNamara, Lorain, and S. V. Burley, Lorain.

The Erie County Medical Society met in regular session at the court house in Sandusky, on June 22. An address of empyema was presented by Chas. Graefe, who exhibited an instrument for facilitating drainage of the pus cavity. He reported a case where this appliance was used with satisfactory results. The discussion was interesting and was participated in by Drs. Haynes, Storey and Southwick.

Arrangements were commenced for a picnic in July, and a joint meeting at Cedar Point in August, with the adjoining county societies.

SIXTH DISTRICT

A. J. MARCH, M. D., Collaborator.

The Portage County Medical Society met June 9 in the office of B. T. Keller at Hudson. Dr. Keller addressed the society on "Reminiscences of Medical Practice Thirty to Forty Years Ago." C. O. Jaster read a paper on "Refraction as an Aid to the Treatment in Nervous Diseases." A luncheon followed the meeting.

EIGHTH DISTRICT

J. R. McDOWELL, M. D., Collaborator.

The following program was presented at the regular meeting of the Muskingum County Medical Society on June 8: "Harelip and Other Facial Deformities," W. A. Melick. "Erysipelas," J. Z. Heston. Dr. Wiseman, as a member of the local Legislation Committee, reported enthusiastic replies from our local representative and senator, in regard to the establishment of a National Department of Health with a Secretary of Health as a member of the President's cabinet.

NINTH DISTRICT

S. P. FETTER, M. D., Collaborator.

Hempstead Academy of Medicine met in Portsmouth in regular monthly session, June 13. Attendance was large and discussion lively, the subject under consideration being the ever-interesting typhoid fever. S. S. Halderman opened with a paper upon "Differential Diagnosis of Typhoid Fever"; discussion opened by W. D. Mickelthwait. Next paper was by F. H. Williams upon "Treatment of Typhoid Fever," L. D. Allard opening the discussion. The meeting was an exceptionally good and interesting one, the participants in the discussion which was general making honest confession of the adversities encountered in the diagnosing of this variable disease. It was generally considered not unwise to wait at last one week in a suspected case before announcing a diagnosis attaining slowly unto a diagnosis by way of reduction ad absurdum. L. D. Allard, in speaking of treatment, reported excellent results from the giving of large doses of calomel, grs. four or five, combined with compound jalap powder every forty-eight hours during the earlier stages.

President J. W. Fitch read the bills passed and pending before the state legislature.

Case presentations: Case 1. Pseudo-muscular hypertrophy. Boy, aged seven, family history, marked hypertrophy of muscles of calves with the peculiar hard, non-elastic feeling to the touch; other features such as general muscular weak-

ness, lordosis and waddling gait, being very characteristic. Presented by R. O. LeBaron.

Case 2. Meniere's disease. Boy, aged sixteen. As presented to the academy the boy is in excellent health, but totally deaf. Was taken sick three weeks ago with headache, violent delirium and low, irregular fever, complete deafness in both ears beginning on second day. Delirium lasted three days. Vertigo prominent from the beginning and now marked by staggering gait. The integrity of the auditory apparatus is absolutely destroyed, there being not the least response to bony as well as membranous transmission of sound waves. Presented by D. A. Berndt.

TENTH DISTRICT

FRED FLETCHER, M. D., Collaborator.

Regular meeting of the Columbus Academy of Medicine, June 13. The program follows. Report of cases. "Differential Diagnosis of Lupus Vulgaris, Ulcerative Syphilides and Epithelioma," by Charles J. Shepard. "The After-Care of Surgical Patients," by Leslie L. Bigelow. Discussion, S. J. Goodman, F. F. Lawrence and J. F. Baldwin.

Meeting of Academy June 20. "Significance of Changes in the Reflexes," by W. D. Deuschle. Discussion, George Stockton, G. M. Waters, E. J. Wilson and W. K. Rogers. "The Treatment of Leg Ulcers," by I. B. Harris. Discussion, T. C. Hoover, Joseph Price and R. B. Drury.

Meeting of Academy June 6. "A Contribution to the Subject of Recurrent Dislocations—Report of an Operative Case," by C. M. Shepard. Discussion, H. H. Baldwin. "Nitrous-Oxid and Oxygen Anesthesia," by W. I. Jones. Discussion, S. J. Goodman, R. C. Rice, H. C. Brown, C. M. Shepard, T. D. Courtwright and C. S. Hamilton.

J. F. Baldwin reported a case of rupture of an ovarian tumor occurring during labor. The child was small and was delivered spontaneously. The patient's abdomen, however, was not diminished much in size after birth, and forty-eight hours later, it being evident that there was free fluid in the abdomen, her physicians tapped her and drew off a large amount of rather thick fluid, which was exceedingly offensive. As the abdomen collapsed a tumor was readily made out on the right side and the diagnosis of ovarian tumor was then made. Dr. Baldwin saw the case an hour later and advised immediate operation. This was accepted, and the operation performed as soon as the patient could be transported to the hospital. On opening the abdomen it was found that the tumor had evidently ruptured, probably during active labor pains. A

sharp peritonitis was present, and everything in the lower abdomen was in bad shape. The tumor itself was necrotic and exceedingly offensive. Was removed without difficulty. Douglas' cul-de-sac was opened and a fluff drain introduced into the pelvis. A second drain was introduced at the lower angle of the incision into the space between the uterus and bladder, and the patient placed in the Fowler position. The operation had been performed four or five days before, and the patient was making an absolutely smooth convalescence.

He also reported a case of aneurism of the innominate in a woman aged fifty-two. The radiograph seemed to show that the arch of the aorta was normal. He had accordingly operated by making an incision between the two insertions of the sterno-mastoid, and ligating the common carotid and the subclavian at their origin. Had ligated with kangaroo tendon, putting on a double ligature about one-fourth inch apart. He had feared cerebral complications from this sudden cutting off of such a large blood supply, but the only symptoms consisted of headache, which persisted for about two weeks. A faint pulse could be felt in the right wrist at the end of three days, but this pulse had not increased very much in force since that time. Convalescence had been absolutely uneventful, and patient left the hospital in good shape at the end of three weeks. Palpation indicated that the innominate had become filled with an organized clot.

In his paper on "Recurrent Dislocations," C. M. Shepard said:

"Without making a systematic canvas of the literature on this subject, tracing every reported case to its author, there seems to have been about fifty cases with operation reported. These are pretty well scattered over Europe and America. The most I have found reported by any one man are eight by Thomas, of Philadelphia. While probably few major operations in surgery have more brilliant results than that of capsulorrhaphy for the correction of recurrent dislocation, perhaps none has received less consideration from the medical profession. The French and Germans have given more attention to this condition than the English and Americans. Just why this should be the case is a matter for conjecture. In recent years, however, considerable study and original investigation have been made upon the cadaver to, if possible, throw some light upon the causes that enter into the production of the conditions prevailing in and about a joint, giving rise to recurring dislocations in that joint. Text-books are distressingly brief on this important pathological condition. Monographs are at a variance, and those who have had enviable opportunities to study the cadaver, even subjects who in life suffered with the condition, report different findings. At one time the accepted opinion was that certain individuals were natural-

ly loose jointed—born with long capsular ligaments which were a strong predisposing factor in later life in the production of chronic luxations. However loosely constructed these individuals may be, they do not prove to be any more susceptible to recurrent dislocation of their joints, becoming pathological in character, than those whose ligaments are taut and snug in general construction. It is not uncommon to see individuals who entertain their friends with exhibitions of joint dislocations. They throw their shoulders and knees out of joint at will, and at the same time reduce these dislocations, all of which is a painless procedure. How interesting it is to see some of your friends dislocate their fingers or thumbs as a mere matter of pastime. These "freaks" are said to be double-jointed, and are seen as such in museums. Regardless of statements and various signed reports of examinations by so-called reputable physicians, for the purpose of deception, these cases are not examples of anomalous joints in that they are double or different from any other joints, more than they have long capsular ligaments supplemented with flexible muscles and long tendons. Such anatomical conditions permit surprising freedom of movement with proper attention to training.

It is in this class of loose-jointed characters that we find the professional who makes a business of falling from street cars and trains, or other corporate properties, thereby dislocating one or more joints, resulting damages and other troubles being the wind-up of the exploit. It is of considerable interest to the profession, and no doubt the legal fraternity also, to make here a differentiation between a dislocation (so-called) produced at will and capable of being reduced at will, and a dislocation the result of force or trauma.

In the first instance, the anatomical conditions are such that the normal articular relations may be made to assume abnormal relations through relation and contraction of muscles, and this abnormal relation be made to maintain without pathological lesions. The individual has it in his power to assure the normal relationship at will, without aid, more than that of his own muscles. Reactions, such as inflammatory phenomena, are wanting, and the joint is not incapacitated. Surgically, we would question whether an occurrence of this kind could be classed as a true dislocation, in the sense we usually employ the term. It is clearly one of muscular control, and should scarcely be considered pathological in nature but rather abnormal. When not on exhibition, or in pursuit of damages, the proud possessor of these freak joints derives every normal service from them. There seems to be no danger of dislocation without desire. The muscle control is such that the joint is normal to all intents and purposes.

In the second instance, the anatomical conditions are such that to effect a dislocation there must be destruction of tissue. The capsule must sustain a rupture, and possibly muscle and tendon tissue be torn. In rare instances particles of cartilage and bone are torn away. A part of all the articular surface of a bone may be thrust through the capsule, thereby seriously complicating the reduction. All the classical conditions and symptoms of dislocation exist with such a

condition. It is not under muscular control. It is produced by force, applied in over-extension, over-flexion, over-adduction, over-abduction, with rotation inward or outward to the extent of rupturing tissues, very tough and elastic, suitable to withstand all normal bodily strain.

Following the reduction of such dislocations are the reactionary phenomena, pain, swelling, loss of function, stiffness, and possibly sensory disturbances. The member is injured, and the patient enjoys all the pleasures and discomforts of an old fashioned dislocation that will keep him company for many weeks.

In shoulder dislocations the usual treatment consists in keeping the arm at the side, in a sling or other support, till the acute symptoms have subsided. In the course of time the arm is allowed freedom of various movements to establish normal function, possible massage, etc., being added.

If the dislocation has been downward and anterior, with rupture of the capsule, the probabilities are that the rupture in the capsule is at the lower inner margin of the glenoid. So long as the arm is kept at the side this part of the capsule is relaxed, with edges of the rupture approximated probably. In the course of time it will have united and become sufficiently strong to meet such tension as may come on it during arm movement. If, on the other hand, freedom of motion is permitted too early, there is danger of failure of the necessary union taking place in the torn capsule, and a hernia resulting. This is all the more likely to occur if there has been a chipping off of the inferior border of the glenoid. Should such a case, in the course of some weeks or months, be subjected to a similar strain as that which produced the primary dislocation, the chances are that a secondary dislocation will result with farther weakening of the capsular support. Such a shoulder is now ready for recurrent dislocations, and they usually occur with a regularity which is distressing to the patient and baffling to the physician. The damage is done in that the capsule is weakened permanently, cicatricial tissue having taken the place of the normal capsule at the point of rupture. Over-abduction, with slight strain over the deltoid, produces the dislocation with ease. Some of the cases in time become sufficiently expert to reduce the dislocation themselves. However, none of these unfortunates get to the place where the recurring dislocations are without pain and loss of function. Neither do they seem to have any muscular control of the occurrence.

In looking over the various histories of these cases I find that several have been sustained while playing baseball—the base runner sliding for the base with the arm extended, coming suddenly in contact with some object, the knee of the baseman for instance, has his shoulder dislocated. The dislocation is downward and forward with rupture of the capsule at the inferior border of the glenoid, but it is interesting to note how few give any history of fracture of the glenoid. For want of a better descriptive name for this type of dislocation, history, etc., I have called it "Base Runner's Dislocation of the Shoulder." They are all alike, and when you have seen one you have seen them all.

A case in point: Mr. W. J. W., aged twenty-

five, a robust athletic fellow much given to sports, sustained a dislocation of the left shoulder some years ago while playing baseball, in the following manner: In running the bases he made a slide for a base, with arm extended in full abduction. Just as he touched the sack the baseman stopped, with flexed knee against the deltoid of the runner, and the shoulder went out with snap. He had the usual treatment following reduction—arm at the side for a time, with gradual return to full movement.

However, in course of time, when that movement had been established, a position of abduction of the arm reproduced the dislocation. It seems that at the time of the original injury there was no thought attached to the possible condition of the capsule, and at succeeding dislocations this was not thought of, but rather it was attributed to the supposed idea that "he was naturally a loose jointed individual, and such a condition most likely to complicate a dislocation." This deduction was thought to be all the more logical because he had a "Tennis knee" which had given trouble for some time. The knee condition, however, was thought to be a dislocation whenever it occurred, but he had always been able to reduce it with a little care and manipulation. Recurring dislocations of the shoulder were therefore considered a natural sequence. During the last year or so shoulder dislocations became so frequent that he was prevented from doing any sort of work that required raising the arm to a right angle with the body. Resting the arm on the back of a chair in which he was sitting was sure to throw the shoulder out of place. A little tap over the deltoid when the arm was extended produced the condition. It was necessary to be constantly on his guard to prevent recurrence. He had as many as three dislocations in one day. These were always accompanied with pain and loss of function. His arm was to all intents and purposes useless. In later months he was able to reduce the dislocation himself, sometimes by grasping his two hands in front of him and pulling in opposite directions. He said that the pain was often so severe that he could not do this but had to have help.

How different is this history from that of the individual who is able to produce false dislocations of the joints.

This man had been treated for his recurring dislocations, and had exhausted the pharmacopea, not only of the physicians and the druggists, but of all the old women in the surrounding country. Believing that something could be done to give him relief, he came to consult Dr. D. N. Kinsman, who, after examination, referred him to me for operation, fully realizing the uselessness of all other procedures.

January 10, 1910, assisted by Dr. H. A. Baldwin, I made a capsulorrhaphy for the correction of the ruptured capsule. The capsule was reached through an incision made from the coracoid process, four inches down the arm, by retracting the deltoid, the pectoralis minor, the coracobrachialis, the short head of the biceps, and incising the pectoralis major; then by rotating the arm inward and outward as required, the field of operation was properly exposed. The loose cicatricial capsule was not resected, as advised by

some operators. A fold, or tuck, of sufficient depth was made, just as the abdominal surgeon sometimes takes a tuck in the abdominal wall. This was held with sutures of chromic catgut. The loose pouch of the capsule was taken up, but no attempt was made to shorten the capsule beyond its natural length. The wound was closed, with a cigarette drain for twenty-four hours, and the healing was by first intention. While I was at it I removed a loose semi-lunar cartilage from the knee that had been giving him so much trouble, and thereby cured the chronic recurrent dislocation at that point. The fact is he had never had a dislocated knee as he so long believed. The arm was dressed at the side for two weeks, and for a sufficient time to have the tissues become strong, he was instructed how to take care of himself. He left the hospital on the twelfth day. Reports from him since advise that the shoulder is strong, and gives no farther trouble; also that his knee is perfectly well.

Several operations have been proposed for the correction of this condition. Resection of the head of the humerus has been resorted to, but without satisfaction. It is needless and unwarranted. Clairmont and Ehrlich devised an operation, based upon the assumption that impaired muscular function, resulting from muscular trauma, was the lesion to be corrected. They thought by taking up muscle slack they would arrive at a cure. The evidently did not take into consideration the effect of constant tension on muscle fiber, in their theory of muscle shortening. In addition to muscle shortening they took a sectional strip of the deltoid, and wrapped it around the head of the humerus so that at each contraction of this muscle there would be a pull upward, sufficient to prevent the head getting low enough to slip out over the glenoid rim. It was all resultless so long as the capsule was not properly strengthened.

The technique followed in this case is the described by Burrell and Lovett, of Boston, in '97, probably for the first time in America, and is practically the same as that followed by Thomas. It is essentially the same as that of Lange of Munich, and Codovilla of Bologna, and is based upon the theory that recurrent dislocation of joints is the result of trauma. We are not here discussing those cases of disease, such as tuberculosis, cancer, etc., It has been pretty thoroughly demonstrated that the operation of capsulorrhaphy, when properly performed, will bring about a cure in such cases. Hence, it must be the capsule that is at fault, and not muscular tissue. The pathological condition that maintains the recurring dislocations is the same as that of the original dislocation. As a matter of record, so far as unofficial report is authentic, spontaneous recovery from this condition has occurred, but I do not believe this, however, and mention it only because of the general absurdity of such a report.

Epileptics have dislocated their joints while suffering the rigors of the disease, and have been cured of the tendency to luxation through operation. Such a case was operated upon and later reported by Dr. H. A. Baldwin before this Academy in 1907.

This operation is not to be regarded as a dangerous one. The dangers to be avoided are the

contents of the axilla, and infection. I do not consider it necessary to make attempt to secure adhesions through dressing the wound open. At one time this was thought to be quite essential.

A. M. Steinfeld presented a plaster model of a case of lateral curvature of the spine—the model illustrating the result of sending a case of this character to the “instrument maker” for an appliance which was constantly worn in the absence of any other treatment. The girl, aged sixteen years, had been literally “braced” into her present deplorable condition. The deformity was extreme, and the bone changes so marked that improvement could scarcely be hoped for even with persistent treatment. In the sitting posture the girl’s chin was in close proximity to the knees; the thoracic and abdominal viscerae were compressed and the heart action so labored, when the girl attempted to walk, that her condition was pitiable.

REPORTS OF SECTIONS OF THE TOLEDO MEETING.

MEDICAL SECTION.

Willard J. Stone, Secretary.

This section held three session which were all very well attended. The program was carried out almost entirely as published. The special addresses by Albion W. Hewlett, of the University of Michigan, on “Circulatory Changes in Exophthalmic Goitre,” and Francis C. Woods, of Columbia University, on “Laboratory Diagnosis,” added greatly to the interest of the meetings.

The papers by members of the section were of an unusually high quality and were followed by spirited discussions.

The following Section officers were elected: Chairman, J. E. Greiwe, Cincinnati; Secretary Willard J. Stone, Toledo; Executive Committee, C. F. Hoover, Cleveland, E. W. Mitchell, Cincinnati.

SECTION ON DERMATOLOGY, PROCTOLOGY AND GENITO-URINARY DISEASES.

C. M. Harpster, Secretary.

This Section has entered upon a very important field of endeavor, that of social hygiene. A very extensive report was submitted by the secretary of the committee. The committee chosen for the coming year is: A. Ravogli, Chairman, Cincinnati; Charles Melvin Harpster, Secretary, Toledo; M. L. Heidingsfeld, Cincinnati; E. O. Smith, Cincinnati; George B. Evans, Dayton; Wm. Lower, Cleveland; Robert S. Walker, Toledo.

The following Executive Committee was elect-

ed: A. Ravogli, Chairman, Cincinnati; E. D. Tucker, Toledo; W. I. LeFevre, Cleveland.

The new chairman of the Section is A. Ravogli, of Cincinnati, and the secretary, Charles Melvin Harpster, of Toledo.

Starling S. Wilcox, of Columbus, presented a very interesting paper in line with the work on the prevention of venereal diseases.

Francis R. Hagner, of Washington, and L. J. Hirschman, of Detroit, the guests of the Section, presented able papers and Dr. Hagner demonstrated his operation by the use of the testicles of pigs.

All the papers were read as noted in the program, and the secretary of the section demonstrated on the phantom the latest instruments and appliances used in urological surgery. A number of examining cystoscopes, the Bransford Lewis and Nitze operating cystoscopes, the intra-vesical cautery, stone crusher and snare were shown. The Keyes’ lithotrites and Thompson’s evacuator, the Luys’ separator and Kolischer’s intra-vesical shears. The new Goldschmidt prostatic incisors for treating prostatic hypertrophy were demonstrated.

SECTION ON EYE, EAR, NOSE AND THROAT.

Wade Thrasher, Secretary.

The Eye, Ear, Nose and Throat Section has reason to feel proud of the Toledo meeting. The attendance was the largest we have ever had and the program was full enough of good things to arouse the scientific interest of all who were fortunate enough to attend. Every essayist except two were on hand and every paper gave evidence of careful preparation and the discussions were full and spirited.

We were particularly fortunate in the selection of our guests this year and it is needless to say they did everything, and more than was expected of them.

It was a real treat to hear a man such as Dr. de Schweinitz, who not only stands in the front rank of scientific attainment but is a gifted orator of charming personality.

The clinic, which was quite an interesting feature of this meeting, was arranged to interest both eye and throat men and was attended by nearly the whole Section.

Taken all in all it was the most successful meeting we have ever had and compares favorably with the inter-state or the section meetings of the national societies.

Thos. Hubbard, of Toledo, was elected chairman, and Wade Thrasher, of Cincinnati, was re-elected secretary. The meeting next year will be held in Cleveland.

SECTION ON NERVOUS AND MENTAL DISEASES.

Samuel P. Fetter, Secretary.

The Section on Mental and Nervous Diseases of the Ohio State Medical Association held its second annual meeting at Toledo, May 11 and 12, 1910. The attendance upon and the interest manifested in each of the sessions bespeaks the decided success of the Section and gives promise of stability to this as a most necessary and permanent department of the state body. Such a department was long desired by the large number of men throughout the state who are devoting their time to this progressive and specialized field of medicine and the creation of a section was absolutely necessary for their proper encouragement and progress.

The Section was made possible to a great extent by the incorporation of "The Association of Assistant Physicians of the Ohio State Hospitals." This association was formed in 1903, met semi-annually at one of the State Hospitals, was regulated by complete constitution and by-laws, its object being the advancement of the standard of scientific work of the state hospital medical staff, the attainment by harmonious endeavor and co-operation of a greater degree of efficiency in the care and treatment of some ten thousand patients of the state. The by-laws and constitution of this Association were so amended that the spring meeting was done away with, being supplanted by the meeting of the Section, thus fulfilling an ambition of the Association—an active affiliation with the State Association.

The Section on Mental and Nervous Diseases was created at the Columbus meeting of the State Association in 1908. Its success is assured. The Toledo meeting reached a high mark as to excellence of program material and interest generally displayed in the program. The guests of the Section were Hugh T. Patrick, of Chicago, who gave the address in this department before the general session upon the subject, "The Differential Diagnosis of Functional from Organic Diseases of the Nervous System," and Chas. R. Ball, of St. Paul, Minn., who read a paper upon "Alcohol Injections in Treatment of Trifacial Neuralgia." The paper was discussed by Dr. Patrick.

The officers elected for the ensuing year are as follows: Chairman, W. D. Deuschle, Columbus; Secretary, S. P. Fetter, Portsmouth; Executive Committee, C. D. Mills, Marysville, F. D. Fernau, Toledo, W. D. Deuschle, Columbus.

SECTION ON OBSTETRICS AND PEDIATRICS.

Richard A. Bolt, Secretary.

This Section held the best meeting this year in the history of the Section. The chairman, Dr.

Gillespie, stated that he had attended a great many medical meetings, but that he had never before been so highly pleased with the uniformly excellent papers and discussions presented. The spirit of the meetings was splendid, a free and frank discussion of each paper taking place. Comparatively few of the men announced for papers did not appear, and in these cases good excuses were given. Fifty-three physicians enrolled themselves as members of this Section.

The election of officers resulted as follows: Chairman, Arthur H. Bill, Cleveland; Secretary, Richard A. Bolt, Cleveland; Executive Committee, George L. Chapman, Toledo; D. S. Hanson, Cleveland.

It is hoped that the Section will bring to Cleveland next year as much enthusiasm, and high grade of scientific and practical papers as were presented at Toledo.

NEWS NOTES

REORGANIZATION OF THE AMERICAN MEDICAL COLLEGE OF ST. LOUIS.

Believing that the time for sectarianism in medicine has passed, the trustees of the American Medical College of St. Louis, at a meeting held on June 6, 1910, unanimously decided that, in the future, the American Medical College shall be conducted as a regular college of medicine. New officers were elected as follows: James Moores Ball, M. D., Dean; J. J. Link, M. D., Treasurer, and W. T. Burdick, M. D., Secretary. The thirty-eighth annual session will open on September 5, 1910, and continue for nine months.

RETIRING PROFESSOR HONORED.

Three hundred physicians of Philadelphia and other cities gave a banquet on May 5 in honor of James Tyson, on his retirement from the professorship of medicine in the University of Pennsylvania, and presented him with a large silver loving cup. W. W. Keen presided and among the speakers were Frank Billings, Chicago; Reginald H. Fitz, Harvard University; George A. Piersol, University of Pennsylvania medical faculty, and John Wanamaker.

AMERICAN MUSEUM OF SAFETY.

The American Museum of Safety has opened permanent museum headquarters in New York, for demonstrations under power of safety devices to prevent industrial accidents. The museum is for the benefit of employers of labor in factories and industrial establishments and for the public generally, as a means of education in the matter of accident prevention. Approximate-

ly, 500,000 persons were killed or maimed in industrial pursuits in the United States during 1909, and 50 per cent of these accidents undoubtedly were preventable. In a large steel plant employing 6,000 men, there were 40 fatalities in 1906. After installing safety devices there were only 12 fatalities in 1909 in the same establishment which then employed 7,000 men. The American Museum of Safety is an organization doing a practical humanitarian work and should be supported in every way.

SCHOOL FOR NATIONAL GUARD MEDICAL OFFICERS.

A school for medical officers of the Ohio National Guard will be held in Columbus, June 8 and 9. The instructors, who are all of the Medical Corps of the Army, are Major Edward L. Munson, Fort Leavenworth; Major Charles R. Reynolds, Fortress Monroe; Major Henry C. Fisher, Columbus Barracks, and Capt. W. Henry Pipes, Washington, D. C.

DR. CUSHING ACCEPTS POSITION AT HARVARD.

Harvey Cushing, head surgeon at the Johns Hopkins Hospital at Baltimore, has accepted the office of surgeon-in-chief of the proposed Peter Bent Brigham Hospital, the new teaching hospital of Harvard University Medical School. With the appointment also of Henry A. Christian, dean of the Harvard Medical School, as physician-in-chief of the hospital, the two leading places on the staff are now filled. Dr. Cushing was born in Cleveland in 1869 and comes of a distinguished medical family, both his father and his grandfather having been prominent physicians. Dr. Cushing graduated from Yale University in 1891 and from Harvard Medical School in 1895. In 1897 he received the appointment of resident surgeon at the Johns Hopkins Hospital at Baltimore, since which time he has been constantly associated with both the Johns Hopkins Medical School and Hospital, and for some years has been the associate professor of surgery in the medical school. Since 1901 Dr. Cushing has devoted his attention principally to neurologic surgery and his skill, shown in operations on tumor of the brain, as well as for injuries to the spinal cord and on various superficial nerve paralyses and neuralgias, have brought him in the front rank of American surgeons. The Peter Bent Brigham Hospital will not be completed until about 1912, which means that Dr. Cushing will not take up his residence in Boston until that time. The fund for the new hospital has been accumulating for about twenty-five years and the

original bequest of \$1,800,000 has grown to about \$8,000,000. The hospital building will be of brick with stone trimmings and the estimated cost exceeds \$1,000,000. In preparing for this hospital the trustees believed that to fulfill its highest purpose it should not only care for the sick but should serve an educational purpose to both medical students and practicing physicians. For that reason they decided to ally themselves with Harvard Medical School and the prospects are that this hospital will some time stand among the greatest hospitals in the world.

Announcement has just been made of a gift of \$250,000 to Western Reserve University, by Mr. H. M. Hanna, as an addition to the endowment of the medical department. It is intended that the income from this gift shall be used largely to place the various clinical professorships on a modern university basis. The gift is very opportune, coming as it does with the news that the consolidation of the Cleveland College of Physicians and Surgeons with the Medical Department of Western Reserve University has been consummated.

NEW HOSPITAL FOR POST-GRADUATE MEDICAL SCHOOL.

Work has been commenced on the new building for the New York Post-Graduate Medical School, which is to cost \$600,000, making the institution's capacity about 400 beds. It is to be twelve stories in height and will have several novel features. The building will include a tower, with rooms for fifty private patients, and on the roof of the tower will be a pavilion for open-air treatment. There is also to be a loggia, open to the street front and to the rear, on three floors, where beds can be kept permanently with exposure to the air. In addition, there will be three long balconies to the eastward, and the entire top of the main building, seven stories high, with the exception of the space taken up by the tower, will be occupied by a roof garden, so that it can be seen that unusual provision will be made for giving the patients abundance of fresh air. There are to be eight operating rooms, 18 x 20 feet in size, but no large amphitheater for operations, as it is believed that the best results can be obtained by having small numbers of students in proximity to the operating table. There will, naturally, be well equipped laboratories for research work, and special attention will be paid to the investigation and teaching of tropical diseases. After the new building is com-

pleted the present quarters of the post-graduate, adjoining, will be rearranged, and the nurses home in connection with the institution is to be rebuilt at a cost of \$100,000.

E. C. Unckrich, Toledo, announces that he is associated with Frank Jacobi, 415 Colton Building, corner Madison avenue and Erie street. Practice limited to eye, ear, nose and throat.

DEATHS

J. F. Fitzsimmons, Northwestern University, 1868, died at his home in Bucyrus, April 11, from angina pectoris, aged sixty-six.

C. G. Clark, University of Michigan, 1864, died at his home at Maumee, April 5, from prostatitis, aged seventy-seven.

G. L. Carhart, Albany Medical College, 1848, died at his home in Marion, April 20, aged eighty-six.

John McCurdy, Western Reserve, 1858 (Jefferson, 1859), died at his home in Youngstown, May 4, from cancer, aged seventy-five.

B. A. Cheek, University Pennsylvania, 1861, died at his home in Marion, in April, from nephritis, aged seventy-two.

S. P. Putt, Starling Medical College, 1878, died at his home in Baltic, May 1, from chronic nephritis, aged fifty-six.

Van Wagener, Cincinnati Medical College, 1876, died at his home in Bridgeport, May 6, from apoplexy, aged fifty-six.

Daniel Mayer, Electric Medical Institute, 1869, died in Cincinnati, May 20, from nephritis, aged seventy-three.

W. G. Gardiner, Ohio Medical College, 1883,

died at his home in Toledo, May 18, from pneumonia, aged sixty-nine.

J. A. Pillmore, Cincinnati College of Medicine and Surgery, 1872, died at his home in Delta, May 20, from cystitis, aged sixty-two.

H. T. Simmons, University of Pennsylvania, 1908, died in Cleveland, December 6, from fracture of skull, aged twenty-six.

I. P. Farquhar, Miami Medical College, 1869, died in Cleveland, May 28, from cerebral hemorrhage, aged sixty-seven.

W. C. Chapman, Miami Medical College, 1873, died at his home in Toledo, May 29, from Bright's disease, aged sixty-nine.

DEATH OF DR. BURRELL.

A year ago Dr. Herbert Leslie Burrell was president of the American Medical Association, and should have presided over the deliberations of the House of Delegates during the first day of the annual session. Illness, however, prevented his attendance at that meeting. Dr. Burrell did not recover from that illness and died April 27, 1910. During the year he had been unable to attend to any of his professional or college duties. Dr. Burrell was fifty-four years of age. In his death the Association has lost a distinguished member and a valuable officer; American surgery a skillful exponent, and the medical profession, one who has always been ready to do his duty as he saw it.

Aluminum instruments should not be boiled in a soda solution like other instruments. They are to be sterilized by boiling in plain water or by passing them through an alcohol or Bunsen flame. Surgical Suggestions.

In dealing with secondary hemorrhage from the rectum (whether bleeding vessels are tied or not), it is better to tampon with gauze wrapped about a stout piece of rubber tubing, than with gauze alone.—Surgical Suggestions.

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ORIGINAL ARTICLES

THE TREATMENT OF NEURALGIAS BY MEANS OF DEEP INJECTIONS OF ALCOHOL.

DR. CHAS. R. BALL.
St. Paul, Minn.

[Read before the Ohio State Medical Association.]

Of all neuralgias which have baffled medical science, the neuralgia of the tri-geminus nerve has been by far the most severe and intractable. Although medical progress in recent years along many lines has been marvelous, in certain other lines we have gone at a snail's pace. This is in a measure true with regard to the etiology, pathology, and until very recently, the treatment of tri-facial neuralgia. Several years ago when I first presented the deep injection treatment with alcohol to our local society, together with a number of cases successfully relieved by this procedure, the chief objection offered to the method was, that it was unscientific. It was unscientific because it relieved the pain but did not cure the disease. What remains of the disease in a true *Tic douloureux* after the pain has disappeared, of course would be extremely interesting to the physician to know, but I never yet saw a patient who cared enough about it to ask. Our etiology is in a primitive state. Most authorities begin with the teeth, enumerate all the causes under the sun and end in a very satisfactory manner with arterio sclerosis. Arterio sclerosis now-a-days is a very popular cause. The fact that a true *Tic douloureux* disappears sometimes suddenly for weeks and months at a time without any treatment whatever and then reappears as quickly again would eliminate most of the etiological factors usually mentioned. The most rational causative factor to my mind which we know of at present is the Neuropathic taint; it is the only positive factor which can be demonstrated in the majority of cases. Of course the large innervation sphere, the many branches of the nerve, its exposed position and course

through so many bony foramina should receive due consideration.

The injection method of treatment is not a new one. In the beginning the peripheral branches of the nerve were injected by various analgesic drugs. Osmic acid was used later with some considerable degree of success. This agent, however, proved to be dangerous. It not only caused degenerative changes in the nerve but in all the other tissues with which it came in contact. Permanent suppurations in the sinuses and necrosis of bone tissue were caused by it. "Pitres and Vaillard in 1887 and Schlösser in 1900 took up a series of experiments with injections of alcohol. Schlösser's method of injection is extra buccal but has for its aim the injection of the gasserian ganglion itself through the foramen ovale. Oswalt, a pupil of Schlösser's, attains the same result but introduces his needle from within the mouth behind the last molar tooth." The technique of both these methods would seem to be exceedingly difficult and require a great deal of practical experience for their accomplishment.

The method of Levy and Baudouire first used in this country by Dr. Hugh T. Patrick of Chicago is the one of choice. In this method the aim is to attain the various branches of the fifth nerve just after their exit from the cranium. The technique of the method is admirably given by Dr. Patrick in a journal of the Medical Association, November 9, 1907. The success of this treatment in my experience depends chiefly on the perfection of one's technique. Of first importance is the ability to attain the nerve with a considerable degree of precision. If one injects a patient three or four times without success, the probabilities are that the patient will be unwilling to submit to further injections and a failure with the treatment is made. The method should not be undertaken by any one who has not devoted considerable time to attaining the various foramina by practice on the cadaver; the attempt otherwise only brings failure and puts the method in disrepute. Of the three

branches of the fifth nerve, the third branch, which has its exit through the foramen ovale, has in my experience been the most difficult of attainment. At first thought it would seem to be the easiest because there are no bony obstructions to be encountered in the path of the needle. This is just the reason why I have found it the most difficult. In the first and second branches we may make use of bony obstructions as landmarks in the direction of the needle. If we give heed to these guides we may be reasonably certain of reaching the right spot, but in the third branch there is absolutely no guide to direct us except our sense of the location of the foramen. It has been my practice in injecting this branch to enter the needle just anterior to the little bony tubercle on the posterior part of the zygoma and at its inferior border, then making an angle of about fifteen degrees with the direction of the needle and a plane passing at right angles through this tubercle, to push the needle into the tissue, hugging the base of the skull as closely as possible the required four centimeters. When the needle is pushed home in this manner and the nerve has not been reached, the only other thing to do is just to hunt around for it; there are no further anatomical bearings to guide one. At this point the sensations of the patient may help us out; if the needle has been directed too far posteriorly on squeezing out a few drops of alcohol, pain in the ear will be complained of; in a good injection the pain experienced by the patient as the alcohol is being injected into the tissues, all goes downward and forward, following the course of the lower jaw. If the pain radiates upward into the temples and back part of the head, the injection should be stopped and either the course of the needle changed or the operation deferred to another time. An injection giving such sensations would be a failure.

In injecting the second branch of the nerve I always had considerable difficulty, until I learned to use the bony obstructions encountered by the needle as guides for my orientation. Dropping a line perpendicularly from the base of the temple border of the frontal process of the malar bone, then going one-half centimeter back of this line, the needle is entered at the lower border of the malar bone. The course of the needle should be directed in a plane parallel to this line and slightly upwards. One should endeavor to encounter the anterior upper border of the external sphenoidal plate, which is ordinarily found at a depth of four centimeters, then by passing the point of the needle just in front of this border and pushing it one centi-

meter farther in, the foramen rotundum is reached, the exit of the second branch. In this way this injection can be given with a considerable degree of precision. One may also avoid the danger of entering the orbit through the sphenoidal fissure which otherwise is apt to occur.

In the beginning of my injection work I entered the orbit on two different occasions with my needle and deposited the alcohol there. Fortunately, however, with no more untoward results than considerable ecchymosis and œdema of the upper and lower eyelids and double vision for several days. In examining the contour of this region, in some skulls this accident would seem to be a remote probability, in others one wonders how it can possibly be avoided if one enters the sphenomaxillary fossa a little too far forward. Once in the orbit with a needle in this location there would be danger of injecting the optic nerve which would be a most deplorable accident. In injecting the first branch of the nerve two different routes may be considered; the deep route as recommended by Levy and Baudouin. In this route the needle is inserted at the upper external border of the orbit where the frontal process of the malar bone articulates with the frontal bone, then hugging the external orbital wall with the point of the needle, pass it almost straight back from $3\frac{1}{2}$ to 4 centimeters. When the needle is in this location force out a few drops of alcohol and if the nerve has been hit, the patient will experience a stinging, burning sensation in the area supplied by it. The other route is through the supra orbital notch, injecting the alcohol as the needle is pushed backward. I have always made this injection with an ordinary hypodermic needle, going into the orbit the full depth of the needle. Considerable swelling of both the upper and lower lids follows both of these injections and the eye is closed for several days. A slight paralysis of the eyelid usually follows the last injection, but this is quite transient in character. The deeper injection I have made a number of times without any more serious accident than a paralysis of the motor oculi lasting from several days to a few weeks. In one patient in whom I made both injections, first using the supra orbital route, I was able afterwards with the deeper injection to increase the zone of anesthesia externally fully an inch. The supra orbital injection should be first tried and if that is not sufficient, the other method used.

In comparing the locations of the foramen ovale and rotundum in different skulls I have found the positions extremely uniform with reference to the landmarks selected as guides; that

is, the foramen ovale lies always on a plane passing at right angles through the tubercle at the posterior part of the zygoma. The foramen rotundum is just internal to the anterior border of the external pterygoid plate. The greatest variation in position seems to be in the depth of these foramina they will vary in different skulls, measuring from the zygoma from one-half to three-fourths of a centimeter. I have found a variation of one-half centimeter in the same skull between the right and left side. In making injections this variation should be kept in mind; changing the depth of my needle has enabled me to reach the nerve more often than by changing its direction. The selection of a needle is the next most important factor in the development of a successful technique. My preference has always been for a fine, reasonably sharp needle, just firm enough so that it will not swerve when pressure is applied in its passage through the tissues. I use a needle without a stylet and non-graduated, the graduations will weaken a fine needle. It would not be a very desirable circumstance to have the needle break off while deeply imbedded in the tissues. My preference for a fine, sharp needle is first, because it reduces the pain of an injection wonderfully; second, the hemorrhage and consequent swelling after injection is not so great; thus the interval between injections is lessened. Three or four injections may often be given in as many days; third, the direction of a needle may be changed by withdrawing the point as far as the skin and starting over again, without the patient being aware of the extra manipulation.

I have often been asked how one can tell when the nerve has been reached. When the nerve has been struck by the needle the patient will jump, just as one does when the dentist hits a nerve in the tooth; the pain will be referred to a certain spot in the upper or lower jaw as the case may be. If a few drops of alcohol are now injected into the tissues, a sharp, stinging, burning pain will be felt in the region supplied by the nerve. After a few seconds, or perhaps a minute, this severe pain will be followed by anesthesia in this region. It is a good plan to interrupt the injection when a quarter of the alcohol has been forced in and to test the sensation with a pin in the parts which we wish to anesthetize. If the parts are not benumbed and deadened to a pin prick at this time it is not likely that a continuance of the injection in this location will accomplish the desired relief. The point of the needle should be shifted a little before any more alcohol is injected. A general anaesthetic ought never to be given. The aim of the operator

should be to so develop his technique that even in the most sensitive patients it will not be required. The sensations of the patients are of prime importance as a guide in making a successful injection. Without the assistance of these the operator is comparable to a mariner without a compass. In an extremely nervous patient a hypodermic of one-sixth or one-eighth grain of morphine may be given from fifteen minutes to half an hour before the injection. A short time ago, after making an injection on an extremely nervous patient, who had received a hypodermic fifteen minutes before the injection, I asked the patient if I had hurt her much. She looked across the room at the nurse who had given the hypodermic and replied, "Not any more than that girl over there."

A thorough knowledge of the regions in the face supplied by the three branches of the fifth should be acquired. Frohse and Zander call attention to the fact that there is quite a degree of variation in the area of distribution of the branches in different individuals. Frohse says on the side of the face there is no spot which is not supplied sometimes by one, sometimes by another, of the three branches. I have found this statement particularly true of the temporal region; sometimes the first branch supplies a large part of this region, sometimes the first and second together supply the entire region and sometimes almost the entire region seems to be supplied by the third branch. When after one or two injections I have been unable to attain the nerve by the deep method I have found it to be advisable and usually successful in giving the patients temporary relief by making superficial injections through the mental, infra and supra orbital foramina with an ordinary hypodermic needle according to the parts of the face involved. The superficial injections if the pain is started from the upper or lower lips are quite satisfactory for temporary relief. The characteristic numbness and stiffness as in the deep injection is obtained, but of lesser intensity and smaller area. The chief objection to these superficial injections is, that afterwards it is more difficult to tell whether a deep injection has been successful or not because of the numbness. In cases where the nerve has been cut or portions of it removed, the superficial injections are apt to be failures. An objection which is often made to this treatment is, that the relief of pain is temporary, that the pain will return. The length of time that a patient may be expected to remain free from pain depends much upon the thoroughness with which the treatment is carried out. I know of cases where one good in-

jection has given relief for over a year. On the other hand cases who have had several injections, and their pain return in a few months. The explanation of this is undoubtedly the good fortune in the first instance to put the alcohol into the nerve sheath, and in the latter, failure at any of the injections to affect the nerve sufficiently. In cases which have relapsed, a repetition of the treatment seems to be more permanent in its results than when first treated. If freedom from pain for a considerable length of time is to be obtained three or four good injections should be made into the same nerve before the patient is dismissed, if possible. It is a great mistake to discontinue the treatment because the pain has been relieved at the first injection.

As an illustration of the affect of alcohol on the nerves when injected into them I will relate an experience with an injection of the facial nerve for Tic convulsive. On January 12, 1909, I injected the facial of one of my patients at its exit from the stylo mastoid foramen with a 90 per cent solution of alcohol, injecting one centimeter of the solution. Before I had withdrawn my needle I saw the shadow of the paralysis pass over the patient's face; if the nerve had been cut the paralysis could not have come more quickly; the result was one of the most complete facial paralyses I ever saw. One month afterwards there was no reaction to the galvanic current either directly or indirectly; there seemed to be a complete R. D. It was two months before there was any response to the galvanic current and five months before any reaction to the faradic current. It was nine months before the electrical reactions were normal. The sensory nerves probably yield as easily to the affects of alcohol as the motor. There is no doubt but that alcohol injected into the nerve in this manner produces a degeneration of the nerve fibres. From one injection the nerve is usually able to fully regenerate, but from a series of injections its ability to do so is to be considered very doubtful. In the use of a solution my preference has been for the 90 per cent strength of alcohol; I have put from one-half to one grain of cocaine to the ounce in the solution, because I have found that it lessens the painful effect of the alcohol on the nerve.

The success of this treatment in tri-facial neuralgia leads one naturally to the query of how far it may be extended to the treatment of other neuralgias and nerve pains? At present its application does not seem to be very wide. Its use in sciatica should be considered dangerous. Cases have been reported where a considerable degree of motor paralysis has existed for over a year

in the leg after an injection into the sciatic nerve. In a case of secondary carcinoma in the pelvis involving the sacral plexus and sciatic nerve where the pain in this nerve was excruciating and desperate means seemed justifiable in order to give relief, I injected the sciatic nerve with a 90 per cent solution of alcohol. The paralysis, both sensory and motor, was very complete; the patient had absolutely no use of her limb and no knowledge of its existence from the knee down. She was unable to tell where it was in bed until she looked for it. The qualities of sensation for touch and position seemed to be completely lost, but some sensation for pain still remained. The motor paralysis appeared to be more complete than the sensory. In a few selected cases of migraine, where the pain during an attack was constant above one eye, by an injection into the supra orbital notch, much relief was obtained for the patient. I have several patients whose attacks have been rendered insignificant from this procedure. In cases of herpes zoster involving the intercostal nerves, freedom from pain may be obtained by injecting the alcohol along the course of the inflamed nerve by means of a hypodermic syringe. In an extremely severe case of neuralgia of the cervical plexus which had resisted all other forms of treatment I obtained a brilliant result by searching carefully for the tender points and injecting the alcohol deeply into the tissues over these places. The relief experienced by the patient from the agonizing pain was as complete and sudden as in any of the tri-facial neuralgias which I have treated. There may be possibilities in still other directions for this method of treatment. For instance, spasmodic torticollis, spastic paraplegias, and the painful spasms often occurring in disease of the spinal cord. It would seem to be perfectly possible with a well developed technique to paralyze the spinal part of the spinal accessory nerve, as well as the sensory cervical excitators and thus accomplish a result otherwise only possible by a severe surgical procedure. It might be possible in inject the posterior spinal ganglia and accomplish in spastic paraplegias the good results which is said to follow the cutting of the posterior roots. The treatment is worthy of consideration and application wherever there is a painful sensory nerve which can be reached with a needle. In motor nerves or mixed nerves it should only be used with a full consciousness of of paralyzing effects.

In closing I would like to impress upon you that the treatment is a success when properly given. Its successful application depends on the degree of precision which can be acquired in reaching the desired nerve and also in eliminating

so far as possible the pain and discomfort to the patient by the passage of the needle through the tissues. To a technique developed with these aims in view the treatment gives not only satisfaction to the patient, but to the physician, as well as an exceedingly gratifying result.

I would like to point out on the skull the parts of my technique which I have mentioned in the paper. Also show you the needles which I use.

A plane passed at right angles through this little tubercle at the posterior part of the zygoma will pass through the foramen ovale; the needle should be entered just anterior to this tubercle and at an angle of about 15 degrees to the plane passing through the tubercle, at a depth approximately of four centimeters, the point of the needle will attain the third branch of the fifth nerve. No matter how hard one may try, they may fail in reaching the nerve; after two or three failures I have found it much better to inject the nerve superficially through the mental foramen than to continue trying to reach it by deep injections.

In regard to the use of needles, recently I had an opportunity to observe the great advantage of a fine needle over a coarse needle in lessening hemorrhage; the patient was inclined to be quite a bleeder. The first injection I made with a fine needle and had considerable hemorrhage, but not enough to interfere with making a good injection. At the next injection I thought I would try a coarser needle and see if the hemorrhage would be lessened; when I pulled out the stylet in order to attach my syringe the blood spouted out through the coarse needle so that it was perfectly impossible to continue the injection. In my experience both in regard to pain and hemorrhage the smaller needles have served me the best.

DISCUSSION.

Dr. Mills: We would like very much to hear from Dr. Patrick, who has been foremost in this particular line of work.

Dr. Patrick: There are so many things that one interested in this treatment might say that it is pretty hard to tell where to begin and where to leave off. I hope you will pardon me if I say the first word about diagnosis. I have been very much surprised and considerably humiliated by some of my medical brethren, because I have had cases sent to me for injection that were far from being trifacial neuralgia; many cases being neurasthenia, headache, and I have had cases of brain tumor. The diagnosis of trifacial neuralgia is so easy that I do not think there is any excuse whatever for one mistaking it for any other sort of a pain, unless it would be a tumor pressing upon the trigeminus in some sort of its course.

The questions that one asks are: First, does this treatment relieve pain?; and second, does it cure? It does relieve pain instantly and completely the moment the alcohol touches the nerve.

It is one of the most grateful things in the practice of medicine. Take one of the patients that is suffering the most excruciating, agonizing pain, and all at once this pain disappears. A patient who is afraid to take a bite of food—afraid to blow his nose, and all of a sudden, after this injection, one can give the patient ice water to drink; take a towel wet in ice water and slap the face and do anything that you like. This patient can go out in a blizzard and never have a touch of pain. In this respect this treatment is one of the most grateful acquisitions.

Does it cure? The period of relief varies exceedingly. I think it varies in the first place in relation to the different cases; some naturally more severe than others. I think it varies, as he stated, with the accuracy of the injection. The longest period was over three years. That was the first patient I ever treated, and I struck the nerve as well as with any case. That patient, I learn, is beginning to have pain. She will have been treated four years in August. At the end of three years, I knew certainly she was well; whether she is really having pain I do not know. The period of relief in my experience runs down from three years to a few months or a day or so. That is one of the difficulties. If the injection is not sufficient—is incomplete—it has relieved the pain entirely, but we know that that relief is only transient; we say to the patient: "You have no pain, but you better have more treatment." The patient says, "What is the use; I will have another injection when the pain comes back." What can a fellow say? We have to comply with the wishes of the patient. We are only servitors of the public. So that it is impossible to say how long the relief lasts from this injection. A good injection with sufficient certainty should give relief for a year, although I think occasionally it does not.

I take the transverse diameter of the face. We all know that different people wear different sized hats. I think that we differ in the size of the face, and that after a fashion, yet with no degree of precision, is a guide to the depth, and I know approximately about how deep I shall have to go. This certainly has been of assistance for the third branch. I have reached the nerve at over 5 for the middle; I have gone over 6 instead of 5. I have reached the second branch all the way from $4\frac{1}{2}$ to 6 centimeters. That seems an enormous variance, but that is a fact, and has to be taken into account. There really lies, next to the transient relief, a great objection to the treatment. I think one of my friends who took this up said that he could strike the nerve every time, and he went in above the zygoma.

When we consider that the second branch runs two inches, and the third branch nearly as deep; that its depth varies and the inside of the skull varies almost as much, it is nonsense to say that anybody could stick in a needle and strike that little nerve anywhere in its course with any precision. When I miss it the first time I am disappointed; when I miss it the second time, I am very disappointed and mad, and when I miss it the third time, which sometimes happens, then I think, "Hang the treatment, anyhow." But when one does strike the nerve, the results are so satisfactory, the patients are so grateful, it makes one feel very good. You take a person

for instance, a minister who had had this thing for twenty years. He had not had a comfortable day in twenty years; he had not had a comfortable night—he had not eaten a meal with comfort in months; he was emaciated to a degree. This old gentleman received an injection; he has not had a pain since, and it has been two and a half years. When one can do that, it is worth while to pester some of the other people a good many times.

If I had known I was going to talk about this I might have brought some figures, but I have treated 114 patients; I have made 400 injections, and I have had what I consider two failures. Now, I do not count as failures, the cases in which I have made two or three injections and the patient got tired of it and quit, because that patient might have been relieved.

But I had one, the middle branch. The woman had been injected a number of times. She finally came to me. I would not promise her anything. I think I gave her six or seven injections and I did not do her a bit of good. Where she had her nerve hidden away, I do not know. I did not get satisfactory results in that case.

Recently I had another case, a man who had been injected fruitlessly by his own physician, and he was sent to me. I never promised anything; I told him I was willing to try if he wanted me to. I gave him from this lower branch four or five injections and it did not do him one particle of good. I had my assistant give him three more, also without relief. He had a middle branch which we relieved at once, and that third branch, I believe, was behind the turgid plate and could not be reached. I was sorry I got his money. Not so sorry that I gave it back, however.

I agree entirely with Dr. Ball, as to the nature of this pathologic evil. We absolutely do not know a thing. We can read whole long chapters and when we get through we do not know any more than when we began.

The danger is a pertinent question. The real dangers are nil. I have never had the slightest trace of infection. I have had something of a hematoma in the cheek causing ecchymosis, and I have had two results that can be considered bad. Compared with the nature of the treatment and number of cases, it does not seem much. The first case was a woman (and these cases I think I can avoid now). But in this case I caused a paralysis of the abducens. It disappeared in the course of two or three months, but she had anesthesia of the cornea. She got keratitis at her home, which was treated by a physician in Minneapolis. Sometimes when she had no more neuralgia, little ulcers would form on the cornea, and finally she got well.

The other case was an old gentleman. Senile—condition very poor. I got the needle too deep. This injection was made one morning; the next morning when I saw him he had an inflamed cornea. I at once turned him over. He was homesick and wanted to get well at once, which he could not do. Finally after much difficulty we got him to go to the hospital and his cornea got much better; then he ran away home, and I cannot hear from him. He is evidently very mad at me, but I suspect that he lost the sight of that eye from keratitis. I am sure he would not have lost

the sight of the eye had he remained under proper treatment.

Those are the only serious results, and now whenever I get the middle branch, and get to where I think the nerve is, I inject a few drops of alcohol, and watch the external rectus. As long as he can look up I know that his sixth nerve is intact. Since I have taken this precaution, I have no such difficulty.

There is one little point in these cases, that I learned recently and that is with regard to distribution. It is fairly well known that while pain may be in one area, it may be started in another area. If a patient blows the nose and this slight contact starts the pain, it may be felt in the supraorbital branch, the supraorbital branch may be touching the middle area where there is no pain; starts the pain here, hence the middle branch has to be injected.

I have recently had two cases in which the supra branch of the supraorbital had to be injected. It comes out between the inward end of the eyebrow and the inward caps of the eye. It varies; sometimes it runs up above the eyebrow. Ordinarily that branch would not have to be done separately, but I have had two cases where I injected that little branch.

Please let me say a word about facial spasm. Facial spasm is radically differentiated from facial tic. A physician who injects for facial spasm ought to be sued for malpractice. A tic convulsive is a habit spasm; it is an affection of the facial nerve—the motor nerve of the face in some part of its course. Tearing out the nerve and cutting the nerve used to be done, but the injection is very much better. But the habit spasms are never to be injected because they are all curable without, unless they are old cases, and whatever the injection, it will cause a paralysis.

A man said he injected facial spasms. He said: "Unless I cause the facial paralysis on one side, the spasm began on the one side." That was not a spasm at all; it was a tic. When one injects a facial spasm I think he should not use 90 per cent. I use 40 per cent, because you eventually cause paralysis.

Dr. Ball: I found that out.

Dr. Patrick: The only way that one does good is by first causing paralysis. The paralysis disappears, and the spasm does not return. They all come back but not for a long time, and during that interval the patient has neither paralysis nor spasm. A patient would always prefer the paralysis to a spasm, but one does not like to cause permanent facial palsy for the purpose of getting rid of a facial spasm. However, there is a time when there is no facial palsy and no facial spasm; so we use an injection which will not cause paralysis. It will begin to improve in three or four weeks, and in two or three months it is entirely gone. When it returns the injection is repeated, and in this way the patient can be carried along without the spasm and without palsy.

As I agree with so much that Dr. Ball has stated, I have got to disagree with some of his statements, and one is in regard to the spasmodic torticollis. I would not inject for spasmodic torticollis. The only operation which is really worthy of consideration in these cases of spasmodic torticollis is practically decapitating the patient. You

have got to paralyze the muscles on both sides of the neck. They can turn it with muscles on each side, and it is not a local spasm; it is mental, and the patient has to do it, and when he does it he has a certain degree of relief, like scratching a place that itches. If it is this side that itches, you would scratch with the right hand, and so with the other side; you will scratch with the most convenient hand. If the right hand were paralyzed you would scratch with the left one, and if both were paralyzed you would scratch with your foot. ..

Dr. Ball (Closing): Speaking about the permanent relief of the pain from these injections, I do not believe there is anything that will permanently relieve the pain unless perhaps the gasserian ganglion is completely destroyed and when that is destroyed, the eye on the same side will also probably be destroyed and so much deformity be caused that you might as well decapitate your patient.

Recently I injected a patient who eight months previously had supposedly had her gasserian ganglion entirely removed; after its removal she never was entirely free from pain and after eight months her pain returned as severely as before. I gave her one injection which she said afforded her more relief than she had obtained after her ganglion operation. Even though this operation can be made at the present time without much danger, it seems to me that we never can be entirely sure of making a complete removal, and if the ganglion is not removed entirely, the pain will be very apt to return. I believe that when the profession become thoroughly acquainted with the efficiency of the alcohol injections, that removal of the gasserian ganglion will be a thing of the past. It is surprising how often really good men fail completely in making these injections. To illustrate this, let me report a case which had been to one of the leading surgeons in this country and had received eight injections from him for the third branch with an absolute failure every time. There was not the slightest area of numbness ever produced on the patient's face by those eight injections and we have never ceased to wonder how any one could inject alcohol eight times without securing numbness some where.

I supposed when the patient came to me that the nerve was hidden in some obscure spot where no one could find it, yet at the first injection I found it to be exactly in the right place and the patient obtained complete relief immediately.

The Dangers of These Injections.—So far as my experience goes the danger is not very great. I have never observed any serious result; I have had some paralyses of the ocular muscles and of the upper lid; also a paralysis of the pupil for a short time, but never anything which did not pass away after a few weeks. I have given these injections to people who were very feeble and usually at the end of an injection their pulse was better than when I began.

Regarding the Pathology.—I looked that up particularly for Dr. Beebe. Oppenheim says that recently certain changes have been discovered in the gasserian ganglion and often in the nerve itself. Other observers state that these changes

have only been observed in cases whose nerves have previously been cut, so there you are.

In regard to Dr. Patrick's case in my city I had an opportunity of seeing this patient last summer and she had perfectly recovered from the paralysis of her eye muscles, but her pain had returned. I gave her one injection and obtained for her relief. The point which Dr. Patrick has brought out in regard to the pain being in the area of one branch of the fifth nerve and having its starting point from another branch, I think is a good one. I recently have had such a patient. The pain was entirely confined to the region of the ophthalmic branch, but it seemed to be started always from the area of the third branch. Numbing of the ophthalmic region produced no relief.

In regard to my injection of a patient with Tic convulsive, I use that word advisedly, after I had read Dr. Patrick's article on facial spasm so that I felt sure of a correct diagnosis. While this patient still has a little Tic on the opposite side of the face, it is nothing to compare with that which he had on the paralyzed side; he is pleased with the result obtained.

I would like to ask Dr. Patrick what distinction he makes between Tic convulsive and spasmodic torticollis. Do they not both belong to the same category of general tics, and when you stop the spasm in one group of muscles, does it not usually go into some other group?

Dr. Patrick: The Tics, but not the spasm

Dr. Ball: I am talking about the tics in the face. I understood Dr. Patrick to say that he could cure the tic convulsive easily, but the only thing he knew to recommend for relief in spasmodic torticollis was decapitation.

Dr. Patrick: I do not recall a single case of tic convulsive which was not curable; spasmodic torticollis belongs to the same general category, but with the treatment it does not respond the same.

Dr. Ball: I have been treating a case recently of spasmodic torticollis; this man had a certain amount of pain in the back of his neck along with his torticollis, and I injected the alcohol over the sensitive spots; his pain was relieved and also his old tic, but a tic in a new group of muscles set in. I presume when I return I will have to recommend decapitation.

Dipping a throat mirror in alcohol will as effectively keep off a film of moisture as heating.
—Surgical Suggestions.

Vomiting may frequently be controlled by one-drop doses of tincture of iodine in water at half-hour intervals.—Surgical Suggestions.

Never divide the annular ligament of the wrist. The hand is much weaker after it is divided than before.—Surgical Suggestions.

A FURTHER CONSIDERATION OF "POLE LIGATION" FOR BASEDOW'S DISEASE.

J. H. JACOBSON, M. D.
Toledo.

[Read before the Ohio State Medical Association.]

The surgical treatment of Basedow's disease really began after Moebius (1896), published his classical monograph, proving that the symptoms of that disease were due to a hypersecretion of the thyroid gland. That Moebius' conception of the disease was correct, has been more than proven by the investigations of numerous experimentors and in particular by the results obtained from operations on the thyroid gland. The exact cause of the overactivity of the thyroid, however, remains still unexplained. The evidence gained from the investigation of Moebius, Beebe and others, in the treatment of this disease by sera, indicate that the future treatment of Basedow's disease will be other than surgical. The best results, however, have been obtained by surgical operations on the thyroid gland.

The operations on the thyroid gland which have been performed for Basedow's disease, may be considered under four groups:

1. Operations on the nerves and blood vessels which supply the thyroid gland.

- (a) Resection of the cervical sympathetic ganglia (Jaboulay, Jonnesco).

- (b) Ligation of the thyroid arteries (Wolfler-Kocher).

- (c) Ligation of the thyroid veins (Tuholski).

2. Removal of parts of the gland or partial thyroidectomy.

- (a) Excision (Kocher-Ferguson).

- (b) Enucleation (Billroth-Porta-Socin-Roux).

3. Operations on the thyroid gland, without the removal of any portion of it.

- (a) Pole ligation (Stamm-Jacobson).

- (b) Pressure atrophy (Werelius).

4. Combined methods.

- (a) Partial thyroidectomy, combined with ligation of thyroid arteries on opposite side.

- (b) Partial thyroidectomy combined with pole ligation on opposite side.

- (c) Pole ligation combined with ligature of one inferior thyroid artery.

The experience with the surgical treatment of Basedow's disease has demonstrated that such patients, on account of their lowered resistance, are poor surgical risks and that they bear operations badly and that while the lesser procedures such as the ligation of arteries, are comparatively safe, the excision of parts of the gland is dan-

gerous and should only be undertaken by the most experienced surgeons. It is incumbent on the surgical profession to emphasize clearly, that partial thyroidectomy for hyperthyroidism is a more serious operation than when performed for simple goitre. The operation when performed for simple goitre, in the hands of experienced surgeons, is safe and attended by very little risk, while in Basedow's disease, thyroidectomy is dangerous, and is attended by a higher primary mortality even in the hands of those most experienced with the operation.

The operations which have stood the test of time and have been found to be of the most value in the surgical treatment of Basedow's disease, are first, ligation of the thyroid arteries, and secondly, partial thyroidectomy.

The operation which I desire to bring to your notice is one which I believe should replace the method of ligating the thyroid arteries. The ligation of the thyroid arteries, so extensively used by Kocher and others, has become classical among the operations for the relief of severe forms of exophthalmic goitre. The operation is designed to diminish the blood supply to the gland and thus lessen its activity.

Ligation of the thyroid arteries finds its chief indication in severe cases of Basedow's disease where removal of the gland is attended by great risk and where it is necessary to improve the condition of the patient before a thyroidectomy is undertaken. The operation usually consists in the ligation of one or both sup. thyroid arteries, and if necessary, the inferior arteries are ligated at a subsequent operation.

On account of the deep situation of the inferior thyroid vessels which lie posterior to the lower lobes of the gland, the ligation of the superior arteries is much easier. Kocher recommends that the superior thyroid artery should be tied close to its origin from the external carotid artery for the reason that, as the artery approaches the gland capsule, it divides into an anterior and posterior branch and if the ligature is attempted near the gland, it is often difficult to secure the posterior branch. Incomplete ligation may account for some of the failures to influence the thyroid secretion after this method.

The operation, while described as a simple one, is often difficult to perform, and it is not always well borne on account of the prolonged search for the artery. It is usually made under local anaesthesia.

At the last meeting of the Mississippi Valley Medical Association, held at St. Louis, Mo., in October, 1909 the writer made a preliminary report on "Bilateral Ligation of the Upper Poles

of the Thyroid Gland for Basedow's Disease." This communication was published in the Cincinnati Lancet-Clinic of February 19, 1910. In that communication, eight cases were reported by the method and it is the purpose of this paper to make further report on those cases and to give a brief synopsis of the operations made since that time.

We called the method a "ligation of the poles of the thyroid gland," or "pole ligation." The principles of this operation are based on anatomical and physiological grounds.

The thyroid belongs to the ductless variety of glands whose secretion can only reach the general circulation through the lymphatics, veins, or both. The operation of pole ligation is designed to check the absorption of thyroid secretion through these channels and at the same time to diminish the amount of blood coming to the thyroid as well as to inhibit its innervation.

In my preliminary report I made the following conclusions:

1. Ligation of both poles of the thyroid gland acts first by diminishing the blood supply to the gland, and thus diminishing immediately its activity; secondly, by directly diminishing and preventing the gland secretion from entering the general circulation by way of the main lymphatic channels and causing a subsequent atrophy of the gland itself.

2. The operation of "pole ligation" is much easier to perform than ligation of the thyroid vessels, and may be as effective as a partial thyroidectomy.

3. It does not disturb the blood supply of the parathyroid glands, nor endanger the recurrent laryngeal nerves.

4. Theoretically, at least, and from the simplicity of its performance, it would seem that "pole ligation" should entirely supplant the operation of simple ligation of the thyroid vessels in Basedow's disease, and in many cases the necessity of partial thyroidectomy.

5. As a preliminary operation to partial thyroidectomy for Basedow's disease, it will be found of great value.

6. At the present time we are warranted in saying that "pole ligation" offers the prospect of cure in many cases, and of lasting improvement in others.

7. The operation of "pole ligation" is a safe one, and in skilled hands should have no mortality.

The subsequent experience which we have had with this operation has shown these conclusions to be correct. The operation is performed under local anaesthesia as follows:

After carefully palpating and determining the position of the upper lobe, and incision is made directly over it. Formerly, two transverse incisions, corresponding to the height of the upper border of the gland, were made, but on account of the increased scar formation, we now employ two longitudinal incisions, on on each side paralleling the inner border of the sterno mastoid muscle. The incision is one, to one and one-half inches long and extends through skin, superficial fascia, platysma, down to deep fascia, when the inner border of the sterno-mastoid muscle can be seen. The inner border of the sterno-mastoid is then loosened, raised and retracted, exposing the fibers of the sterno-thyroid muscle, which run in the opposite direction to those of the sterno-mastoid. These fibers are separated for about one inch, the deep fascia covering the thyroid will then be exposed. This fascia is next divided, and the capsule of the gland brought into view. The muscles are well retracted by blunt hooks. A ligature carrier, or a large curved pedicle or aneurism needle is used to pass the ligatures. The material used for ligation has been mostly linen or silk. Theoretically it seems that heavy black linen, on account of its slowness of absorption, is best.

Theoretically at least, it seems that the ligatures should be placed extracapsular, for the reason that the lymphatic vessels of the gland parenchyma empty into those contained within the capsule and that the extra capsular ligature will more effectually stop the gland secretion. Some little resistance may be encountered in passing the blunt needle about the pole; this, however, is quickly overcome. When the blunt point of the needle has been passed, the ligature is grasped and the instrument withdrawn. By cutting the loop, we thus have two ligatures surrounding the gland pole. These are carefully separated and tied, leaving a space between them of from one-fourth to one-half inch. Immediately after ligation the gland tissue in the vicinity of the ligature becomes blanched.

The closure of the wound consists in the approximation of the muscles, by one or two interrupted catgut sutures, followed by approximation of superficial fascia and skin.

We are confronted by many difficulties in estimating the effect or value of any operation for the relief of Basedow's disease, particularly as to what constitutes a cure in these cases. All of these patients are improved by the operations of partial thyroidectomy, ligation of arteries, or pole ligation. In only a very small number of cases, do all the symptoms entirely disappear. The end result depends largely upon how early

the cases come for operation. Many of the cases, after partial thyroidectomy, still have more or less tremor, tachycardia, and in many, the exophthalmos does not entirely disappear. The disease, however, has been markedly influenced and the patient's condition improved after the operation.

It is obvious that the same conditions confront us in estimating the value of pole ligation as we have in estimating the end results of partial thyroidectomy. In my preliminary communication (Lancet-Clinic, Feb. 5, 1910), I collected and tabulated eight cases of pole ligation performed by Drs. Stamm, James & Peter Donnelly, W. H. Fishers, and myself.

In this series of eight cases, the operation in one case (case 5) was without effect, the patient being moribund at the time of operation, and in another (case 2), although markedly improved from the pole ligation, died after a subsequent thyroidectomy.

Of the remaining six cases:

Case 1. Operated April 1, 1908, by Dr. Stamm and reported as symptomatically cured, still remains in excellent condition, no return of symptoms, but there has been a slight return of the goitre.

Case 3. Operated March 8, 1909, by Drs. James and Peter Donnelly and reported as symptomatically cured, still remains in excellent condition; has at times some rapidity of the heart action and a somewhat noticeable exophthalmos.

Case 4. Operated April 23, 1909, by W. H. Fisher and reported as symptomatically cured, has had recurrence of symptoms, but remains decidedly improved. Heart's action a little rapid. This case was complicated by albuminuria.

Case 6. Operated May 26, 1909, by W. H. Fisher, reported as symptomatically cured, had recurrence within six months and a thyroidectomy was done with good results.

Case 7. Operated July 2, 1909 (J. H. Jacobson), reported as markedly improved, has had a return of her goitre. Has some of her former symptoms, none of which are as severe as they were before the operation. This patient had a mitral insufficiency, and since the operation, has had another severe attack of articular rheumatism. This patient will need a thyroidectomy.

Case 8. Operated September 18, 1909, by J. H. Jacobson, reported as markedly improved, although not entirely free from symptoms, has been greatly benefited by the operation and has been able to resume his school work, which he did not do previous to the operation.

Since reporting these cases, I have been able to collect six other cases of pole ligation and append a synopsis of them herewith.

The operation has been performed by A. J. Ochsner of Chicago by the original method and in combination with partial thyroidectomy. I have been unable as yet to get the details of his operations.

Of the last series of six cases, one, an extremely severe case of Basedow's disease, died; in this case both upper poles were ligated under local anesthesia at one operation. In the future, I would operate such extreme cases in two stages, ligating one pole at each operation. Of the remaining five cases, four have been markedly improved, and one, although followed by some improvement, is too recent for a final estimate as to the effect of the operation:

No. 1. February 25, 1910. Operator: J. H. Jacobson. Age: 30. Duration of disease: Twenty-two years. Hypertrophy heart, with systolic murmur, apex beat markedly displaced; pulse 130. Tremor of hands; nervousness extreme; restlessness; marked psychic depression. Exophthalmos: was extreme, now moderate in both eyes. Thyroid gland: Gland markedly enlarged, including isthmus; right lobe larger than left; cir. neck, 13 inches. Anaesthetic: Local, novocaine $\frac{1}{2}$, and adrenalin. Operation: Bilateral pole ligation with No. 4 silk, double ligature and each pole. Subsequent course: Markedly improved; pulse four days after operation, 90. Marked psychic improvement.

No. 2. March 15, 1910. Operator: J. H. Jacobson. Age: 50. Duration of disease: Eight months. Heart not enlarged, no murmurs, very rapid; pulse 115-130. Extreme nervousness, emaciation, tremor of hands. Exophthalmos: extreme. Thyroid gland: Right lobe larger than left, gland hard. Anaesthetic: Local, novocaine $\frac{1}{2}$, with adrenalin. Operation: Bilateral pole ligation, both, superior poles. Duration of operation: Twenty minutes. Subsequent course: Rapid increase in pulse rate and nervousness. Died within three days. No effect from operation.

No. 3. October 26, 1909. Operator: J. R. Eastman, Indianapolis, Ind. Age: 36. Duration of disease: Two years. Tachycardia very pronounced; pulse 140-180. Tremor, neurasthenia, insomnia, glycosuria, albuminuria. Exophthalmos: pronounced. Thyroid gland: Enlarged to six times its normal size. Operation: Ligation "en masse" of both upper poles of thyroid. Subsequent course: Steady improvement, January, 1910; pulse 80-1000. Tremor is decidedly lessened. Stellwags' sign is no longer demonstrable. Thyroid gland decreased in size.

No. 4. March 3, 1910. Operator: Peter Donnelly. Age: 35. Duration of disease: Eight months. Heart dilated; tachycardia; pulse very rapid. Extremely nervous; tremor of hands. Exophthalmos: Clearly noticeable. Thyroid gland: Slightly enlarged. Anaesthetic: Ether. Operation: Ligation of both upper poles. Duration of operation: Twenty minutes. Subsequent course: Gradual improvement. Trace of albumin; pulmonary tuberculosis.

No. 5. April 14, 1910. Operator: L. A. Brewer. Age: 22. Duration of disease: Eight months. Heart normal; pulse 90-100. Nervousness, tremor. Exophthalmos: None. Thyroid gland: Slight enlargement. Anaesthetic: Ether. Operation: Double ligation of upper poles. Duration of operation: Thirty minutes. Subsequent course: Pulse slower, heart and general condition improved. Some improvement, too recent to give final results.

No. 6. November 10, 1909. Operator: P. Donnelly. Age: 34. Duration of disease: Three years. Heart's action bad; been extremely rapid, under rest and sedatives before operation was 98 to 108. Extreme nervousness. Exophthalmos: One eye marked. Thyroid gland: Moderate enlargement. Anaesthetic: Ether. Operation: Double ligation of poles. Had severe attack of tonsillitis during convalescence; pulse eleven days after operation 70 to 80. Markedly improved.

DISCUSSION.

James Donnelly, Toledo: After having a few sudden deaths in the operation for removal of enlarged thyroid glands or hyperthyroidism we welcome an operation that simplifies the procedure. We first ligated the blood vessels, but with considerable difficulty, as Dr. Jacobson has mentioned. Later on we ligated the pole, as described, and with very good results. The ligations we did practically all under local anesthesia, and we usually tied up each pole separately, using the double ligature, as the doctor has mentioned in his paper, and you will notice when you tie these ligatures an immediate blanching of the glands, showing there has been a considerable decrease in the quantity of blood that was sent to the gland. Dr. Crile yesterday showed that there is some condition of the brain cells that has to do with the condition, and that the separation of the brain cells from this gland, that is, the nerve connection, has been an element in the successful treatment of these glands. That was rather exhaustive, and those of you who did not hear his paper, should read it later and get some valuable points. The results we had had have been very good, and in the future in cases of Basedow's disease that come under our observation and require surgical interference, we will resort to pole ligation.

S. J. Foster: I think the work along this line has been of great value. Pole ligation is still easier than ligation of the arteries, which, theoretically, is very easy, yet at times it is very difficult. I had one case in which I attempted under local anesthesia to tie off the arteries, and after I tied off one side, the patient would not have further interference. Some four or five months after that I wanted a piece of thyroid tissue for transplantation, and I induced her to allow me to remove a piece of the other gland, and in doing so, within the capsule, after removing a piece, I did practically the same thing that Dr. Jacobson mentions—I tied off the pole of the thyroid. But this other operation without the capsule is so much easier, with practically no mortality and promises a great deal, and I believe we owe these men a great debt of gratitude.

J. H. Jacobson (closing): The innervation of the thyroid gland, the exact distribution of these nerves, is not known. We reason by analogy that the arteries, veins, lymphatics and nerves of the thyroid gland have the same relation to each other as throughout the entire portion of the body, so that when we put on a ligature we get the arteries, veins, lymphatics and nerves. I think the lymphatics are the most important. It is shown that the thyroid secretion reaches the circulation through the glands. In many of these cases the lymphatic glands are found enlarged at time of operation. On cross-section of these glands also you will find the characteristic colloid material in them and surrounding them. Theoretically at least the ligature should be placed outside the capsule. As Dr. Stamm told us some time ago, the cure of his case was an accident. In that case the patient was in such extreme condition that he took the needle and passed it up around the pole of one side, and the patient has been practically well for two years. That patient has recently shown a recurrence during preg-

nancy. To Dr. Stamm belongs the credit of having first suggested the procedure, and Dr. Donnelly I believe was the first to carry it out on both sides of the gland.

NYSTAGMUS AS RELATED TO DISEASES OF THE INNER EAR AND CEREBELLUM.*

WM. B. CHAMBERLIN, M. D.
Cleveland, O.

[Read before the Ohio State Medical Association.]

The experimental investigations of Neumann and Barany in regard to nystagmus of otitic and cerebellar origin; their careful observation of the phenomenon in pathological cases, applying thereto the principles derived from experimentation; together with the accurate classification of the various forms of nystagmus, have revolutionized the diagnosis and treatment of diseases of the inner ear. They have made a distinct contribution to the diagnosis of lesions of the cerebellum.

Ear nystagmus, according to Neumann and Barany, possesses certain definite and differentiating characteristics.

(1) It is rhythmical in character—successive cycles being equal as regards time.

(2) Each cycle consists of two movements, a quick and a slow—equal in extent.

(3) The nystagmus is usually rotatory in character, though we may have horizontal or vertical as well as various combinations.

(4) Glance in the direction of the quick component increases the nystagmus. Glance in the direction of the slow component causes it to diminish in intensity or even to disappear.

The phenomenon of nystagmus and its relation to stimulation of the semi-circular canals has been known for many years. Purkinje, in 1825, was the first to publish observations on dizziness caused by turning, with the resulting movements of the eyes. His investigations were followed by those of Flourens, Gotz, Mach, Breuer, Crum Brown and Högyes. To Ewald, however, belongs the credit of establishing the head and eye movements as due to currents in the endolymph. This he proved conclusively by means of his pneumatic hammer with which he experimented upon the semi-circular canals of doves. But Neumann and Barany deserve great credit for the elaborate and careful manner in

*This and the following two papers were all discussed together. The discussion follows the third paper.

which the phenomenon has been produced, classified and studied and for the definite way in which they have established it as a symptom of inestimable worth in the diagnosis of diseases of the inner ear and cerebellum.

Within the limits of the present paper it would be impossible to review the history of nystagmus or to discuss its experimental production. The former must accordingly be omitted entirely, while some knowledge in regard to the latter must be presupposed.

Nystagmus is a reflex. It is accordingly involuntary, though like most reflexes it can be controlled to a certain extent, as by position of the eyes, convergence, etc. Under normal conditions the aggregate stimuli from semi-circular canals, cerebellum and Deiter's nucleus on the two sides of the head are equal and no involuntary movements of the eyes are present. But let this equality be disturbed and nystagmus results. If we take a balanced bar and suspend from its ends equal weights, the bar remains at rest and in balance. Let now the weight on one arm be increased or the weight on the opposite arm be diminished and the balance is destroyed. The bar declines on the side of greatest weight. So with the eyes in regard to the direction of the nystagmus. Normally, the total stimuli on the two sides being equal, the eyes remain at rest; no nystagmus is present. Let now the total stimuli on one side be increased over the total on the other side and nystagmus results. Its direction, i. e. the direction of the quick component, is always toward the side of greater stimulation. With a circumscribed suppuration of the right labyrinth, as for example in the case of fistula of the horizontal semi-circular canal, the total stimuli on the right side would be greater than the total on the left and typical ear nystagmus would result. Its quick component would be toward the right or diseased side—its slow component toward the left. Glance in the direction of the quick component would cause the nystagmus to increase in intensity, glance straight ahead or toward the left would cause it to diminish in intensity or probably to disappear entirely. The degree of dizziness would be proportional to the degree of nystagmus, no dizziness being present when the nystagmus was lacking.

If the inflammation was circumscribed and not diffuse the right labyrinth would still react to thermic stimulation, injecting the ear with water above body temperature would cause the nystagmus to increase, injecting water below body temperature would cause the nystagmus in the opposite direction or toward the left. In addition, unless the opening of the fistula were more

or less completely closed by granulation tissue, nystagmus would result from compressing as well as from rarefying the air in the external canal by means of a Siegle speculum. The direction of this nystagmus could hardly be determined before hand, except that the nystagmus from compression would be in the opposite direction to that caused by aspiration. This latter fact would distinguish it from the nystagmus due to pressure upon an abnormally moveable stapes.

If the patient was placed upon a revolving stool and turned ten times to the left, and the duration of the after nystagmus to the right carefully noted, it would be found that this after nystagmus to the right might persist longer than the after nystagmus to the left following turning to the right. If now the circumscribed inflammation in the right labyrinth should become diffuse, resulting in complete loss of stimuli from the labyrinth in question or if the labyrinth should be destroyed by operative interference, as in the performance of the labyrinth operation following the radical, a striking sequence of phenomena would be noted. Whereas the initial nystagmus to the right had been slight, causing little if any dizziness or discomfort and only noticed with glance to the extreme right, the nystagmus now present would be most marked in character and would be accompanied by discomfort, dizziness and nausea. Its quick component, instead of being directed to the right would be directed to the left or sound side, and the nystagmus would be present not only with glance to the left but with glance to the right and straight ahead as well. The nystagmus, and with it the dizziness, would gradually disappear; first, the nystagmus with vision to the right, next that with vision straight ahead and finally, after a much longer interval, the nystagmus with vision to the extreme left. We have here as it were, a quantitative estimate of the nystagmus. Eyes, muscles, joints, cerebellum will compensate in time for, or become accustomed to the loss of stimuli from the right semi-circular canals. The nystagmus and with it the dizziness will ultimately disappear entirely.

The right ear will now no longer react to thermic stimulation or to aspiration or compression. It will still react to the galvanic current, for the latter acts not only upon the nerve endings but upon the nerve trunks themselves. The after nystagmus to the left, resulting from turning to the right will now be greater than the after nystagmus to the right resulting from turning to the left. In other words, after destruction of one labyrinth the after nystagmus is always greater toward the sound than toward the

diseased side. Barany has been able to verify this rule in all cases which he has investigated.

Nystagmus is not only an invaluable symptom in diseases of the inner ear but its occurrence and observation throws great light upon certain cases of cerebellar involvement. Whereas the nystagmus in circumscribed inflammations of the labyrinth is toward the diseased side, it is toward the sound side in diffuse or destructive inflammations. The two processes, as we have seen, can be accurately differentiated by injecting with hot or cold water by aspiration and compression, or by turning. In cerebellar abscess consequent to middle ear suppuration, however, the nystagmus is always toward the diseased side, unless the abscess should be of such extent that the whole half of the cerebellum is destroyed. The nystagmus toward the diseased side persists and does not change its direction as in the case of diffuse labyrinthine suppuration following a circumscribed process. This cerebellar nystagmus, too, is *further* distinguished from nystagmus of labyrinthine origin. Whereas the former is extreme at first, decreases gradually and ultimately disappears, nystagmus of cerebellar origin is slight at first but increases later in intensity.

(1) With a nystagmus to the diseased side then we must distinguish between:

(a) A circumscribed labyrinthine suppuration; and

(b) A cerebellar abscess.

With a circumscribed suppuration the involved labyrinth would still react to heat and cold. We would also have the signs of labyrinthine fistula on aspiration and compression. If the ear no longer responded to thermic stimulation we might still have reaction to the galvanic current as well as to pressure. Here the diagnosis from the nystagmus could not be made. In such a case with nystagmus to the diseased side and reaction to pressure and galvanism but not to heat and cold, according to Neumann, the labyrinth operation would be performed immediately after the radical. If, following the operation, the nystagmus previously directed toward the diseased side should be directed toward the sound side the diagnosis of labyrinthine suppuration without involvement of the cerebellum could be made. In the experience of the Politzer clinic cases of cerebellar abscess occur not in connection with circumscribed inflammation but in connection with those of a diffuse or general character. To carry our supposition still further, if after obliteration of the labyrinth on the diseased side the nystagmus toward the diseased side should still persist and should not change toward the sound side, then the nystagmus must come from some intra-

cranial origin. For a sound vestibule, if the opposite vestibule is destroyed and the cerebellum not involved, must always cause a nystagmus to its own side.

(2) With a nystagmus toward the diseased side and vestibule no longer capable of stimulation, the origin of the nystagmus must be intracranial and this intra-cranial stimulation must be greater than the stimulation from the opposite and intact cerebellum and vestibule; for, as above mentioned, an intact vestibule if unopposed must always cause a nystagmus to its own side. Here the nystagmus toward the diseased side could only point to a diagnosis of cerebellar abscess. The nystagmus would, of course, only be considered as one of a train of symptoms in establishing a diagnosis. Due attention would be paid to pulse, temperature and other indications of cerebellar involvement.

In cases of nystagmus of otitic or cerebellar origin, the position in bed is of interest and easy of explanation. With a circumscribed inflammation on the right side and with it a nystagmus to the right the patient lies upon the right side with head buried in pillow. In this position the eyes are turned involuntarily toward the left and the nystagmus and dizziness are decreased. Let now a diffuse suppuration follow the circumscribed or let the right labyrinth be removed by operation, then the patient does not lie upon the right but on the left side, for in this position the eyes are directed to the right. The nystagmus and dizziness, most extreme with vision toward the left, are decreased by glance in the opposite direction. Placed in the Romberg position a patient with nystagmus to the right will fall to the left and vice versa. In other words, he falls in the direction of the slow component.

The study of rhythmical nystagmus has elucidated the pathology of so-called Meniere's disease or, as milder attacks are frequently designated, Meniere's symptom complex. In fact, Meniere's disease as a pathological entity can be said no longer to exist. In the apoplectic form, characterized by intense dizziness and sudden loss of hearing, if seen immediately, the nystagmus might be directed for a brief interval to the diseased side in case only one ear was involved. At time of observation however, it would undoubtedly be directed toward the sound side. Deafness on the involved side would be complete and the ear would no longer react to thermic stimulation. A recent case of suppurative labyrinthitis might illustrate the point in question.

The patient, a railway switchman, had an acute suppurative otitis for two weeks. While working he suddenly became extremely dizzy and com-

pletely deaf in the involved ear. Observation at the hospital showed a marked nystagmus to the sound side with glance in all directions. The ear no longer reacted to heat and cold. The case was operated on another service and the labyrinth not opened. At operation there was found an acute mastoiditis complicated by a perisinus abscess, as well as an extra dural abscess; the infection probably occurring by way of the ductus endolymphaticus. The wound healed promptly. When again observed several weeks later the nystagmus and dizziness had disappeared entirely, the patient remained completely deaf in the involved ear while injections with hot and cold water produced no effect.

A boy aged fifteen had been under observation and treatment for a year. On the left side he had a chronic discharge with hearing for watch at fifteen centimeters. On the left there was a healed perforation; hearing on this side for watch was negative. Both ears reacted to thermic stimulation. Following an attack of mumps he developed a nystagmus to the right on glance to right; the hearing for watch was negative; hearing for speaking voice was markedly diminished. On the opposite side the hearing remained the same. Both ears still reacted to heat and cold. This case was observed during Dr. Neumann's visit to Cleveland and was seen by him in consultation. At the end of five to seven days the nystagmus toward the right had completely disappeared. The hearing up to the present time has not improved. Here we have to deal evidently with an intoxication, or a neuritis of the auditory nerve—the irritation of the vestibular branch resulting in nystagmus, that of the cochlear branch resulting in deafness.

To recapitulate:

I. Nystagmus of otitic or cerebellar origin possesses definite and distinguishing characteristics.

II. The location of the diseased process can in many cases be definitely determined by a careful examination of the vestibular apparatus.

MASTOID OPERATIVE METHODS AND PROGNOSIS AS INFLUENCED BY LABYRINTHINE DISEASE.

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[Read before the Ohio State Medical Association.]

Middle ear suppuration may go on to involvement of the labyrinth. By this route it may reach the brain. This complication materially affects the

prognosis of any recrudescence phase of infection in the disease, and when surgery is to be resorted to it must be reckoned with as an important factor in determining the management of the case.

Disease of otitic origin has long been known to be the most frequent cause of brain abscess and septic meningitis, and out of sixty-three cases of uncomplicated diffuse meningitis observed in a large clinic, twenty-two of these cases were found to be caused by labyrinthine suppuration. These investigations date back only as far as 1881, so that the data that has been accumulating covers a period of twenty-nine years, for up to that time little was understood or known of this pathologic entity. The investigations which had been made as to labyrinthine functions had not, up until a year or two ago, been analyzed sufficiently to give a basis for a definite symptomatology where disease was present. This was realized when on this side of the Atlantic, Reik, in 1907, attempted to collate the literature upon this subject. The general symptoms of fever and headache were well recognized, but when it came to the local symptoms due to the labyrinthine involvement, while the presence of some of these could be recognized as determining the nature of the case, the grounds on which they were based could not be well understood. The relation of vertigo, co-ordination disturbances, nausea and vomiting, and the loss of hearing due to the pathological conditions in the labyrinth were not understood because at that time we had not accumulated the data upon the elaborated tests demonstrating the function of the healthy labyrinth. The pathology of the disease has now come to be much better understood. In the light of the accepted findings as to the physiological tests we have ability to definitely make out a symptomatology for labyrinthine disease so that from these symptoms we can *a priori* anticipate the pathological changes in the labyrinth.

It should be taken as a matter of course that in a disease as rare as labyrinthine infection the presentations made in this paper are not based upon personal experience but upon a study of the reported cases of others working in larger clinics; upon an investigation of the recent work of Neumann, Alexander and Barany during a period of study in Vienna, upon work in the laboratory and dead room, and a search of reported labyrinthine work in this country.

Opinion varies somewhat as to the frequency with which this form of disease is met, some placing it as low as 1 in 500 cases of middle ear suppuration, but most observers give the percentage as running from .77 up to 1.25 per cent. This makes the statement of Friedrich seem reasonable,

that one doing otologic surgery can anticipate that he will meet with cases of labyrinthine suppuration about once in every 100 cases treated or operated. Undoubtedly this percentage will be higher in those clinics in which there is a larger percentage of juvenile cases, as the disease is of much greater frequency in the earlier period of life. Thus in 90 cases reported by Gerber, 37 occurred in children under 10 years of age; 15 cases between 11 and 20 years of age; 16 between 21 and 30 years of age, and for the next four decades, of life, 7, 8, 5 and 2 cases respectively. This shows a great preponderance of the disease in the early years of life and may be explained by the greater vulnerability of the bony tissues in the young, erosion into the labyrinth taking place more readily in the less dense tissues of childhood; and again by the fact that labyrinthine suppuration adding greatly to the gravity of the diseases, cases with this complication may become fatal, thus diminishing the percentage of cases to be found in those older.

The labyrinth is to be regarded as a complicated lymph vessel inclosed in the petrous portion of the temporal bone immediately surrounded by a denser capsule, and presenting several openings connecting it with surrounding structures. Thus we have presenting towards the tympanic cavity the two fenestrae, the oval and the round. Toward the cranial cavity there is the internal auditory meatus connected with the labyrinth by perforations into the vestibule and modiolus for the filaments of the nerve; and the aqueductus vestibulae which ends extradurally and contains endolymph, and the aqueductus cochleae which ends intradurally and contains perilymph. In addition to these openings there are points at which the capsule of the labyrinth is in close relationship with the surface of the petrous bone. Thus under the promontory on the inner wall of the middle ear we find directly the cavity of the first turn of the cochlea. In the floor of the antrum the smooth bulging surface is due to this being the curve of the horizontal semi-circular canal. The arch of the superior vertical makes a distinct ridge in the floor of the middle fossa; while on the posterior face of the pyramid is to be seen bulging from the posterior vertical. Now infection of the labyrinth is possible through the openings above named, namely, the internal meatus, through the aqueducts or either of the fenestrae. While we are speaking of the cranial side, direct continuation of disease is anatomically only possible by way of the internal auditory meatus. From the middle ear side we must have some destruction of tissue to explain infection. With destruction of the foot-plate of the stapes in the

oval window, or loss of, or destruction of the membrane in the round window, we have a field of entrance opened up for infection or degeneration. The prominence of the horizontal canal in the floor of the antrum is especially subject to the action of pus agents, or erosion from the pressure of cholesteatomatous or other masses filling this cavity so that it forms a particularly vulnerable point, by which there may be penetration from the outside through the labyrinthine bony capsule. The prominence of the first turn of the cochlea is also another point where from extensive or destructive disease of the middle ear cavity the labyrinth may be penetrated.

The collective investigations of others have shown that the erosion of the horizontal canal is as frequent as would be expected from its anatomical relation to the diseased middle ear structures. In the first reports on labyrinthine disease naturally the descriptions of the pathological findings were not recorded in so exact a manner as is attained now since there is a better classification of the lesions. But in a collection of cases reported by Jansen this canal was perforated in 132 of a total of 170 cases. In a report by Lucae, comprising fifty cases, the wall of the canal was perforated in thirty-two. Heine, formerly in Lucae's clinic, but now in charge of the otological clinic in Königsburg, reports a total of fifty-seven cases in which perforation of the horizontal canal was found forty-three times. Up to 1907, the time his noteworthy paper was presented to the American L. R. O. Society, Richards had personally had eleven cases of labyrinthine disease in which the horizontal canal, either alone or in combination with other lesions of the capsule was found involved in nine cases. Next in frequency is the involvement of the oval window. But aside from these routes by which the disease enters the labyrinth, secondarily the capsule may be penetrated from within outwards, so that at operation, or on the postmortem table, other defects may be found, as penetration of the vestibule through the lamina cribrosa into the internal meatus, or from the arches of the anterior and posterior vertical canals to the surface of the pyramid, or by the route of the aqueducts to the meninges or cranial cavity. Enough of these cases have now been studied to show that all these several routes of infection are found clinically.

Experimentation on the labyrinth, both as to its acoustic and its non-acoustic function, dates back as far as 1824. Flourens in Paris at this time made careful investigations as to the function of partial and complete destruction of the labyrinth, and more particularly the semi-circular

canals, in pigeons. About the same time Purkinje in Vienna noted the appearance of nystagmus after the development of vertigo on turning. At that time the treatment adopted for the insane who were violent was to put them in the turning chair and produce vertigo, and Purkinje saw this nystagmus after turning; but he thought the nystagmus was of cerebellar origin due to the inertia of the brain. Neither of these men knew of the experimentations of the other, and for forty years their work was forgotten. After this period, Meniere in his experiments developed the relation of the semi-circular canals to vertigo, and he read the work of Flourens but not of Purkinje. Meniere had under study the case of a girl who caught a severe cold, suddenly became deaf, had severe vertigo and died. On post-mortem he found plastic exudate in the semi-circular canals, and before this he had succeeded in dissecting out externally the canals without destroying hearing until the cochlea was removed.

While the knowledge gained from these investigations was never again lost, it was yet necessary for some one to determine that vertigo in the human being was the same and corresponded to the turning of the body in the pigeon, which turning is associated with nystagmus. This was done by Breuer in Vienna in 1874. The otologic surgeon owes the elaboration of the physiology of the labyrinth, as we understand it now, to the investigations of Barany in Politzer's clinic in Vienna. It is not feasible in this paper to go into detail as to the order of these experiments in the way in which this knowledge has been built up.

Just as we have come to speak of the nerve of Willis as two nerves, the auditory and facial, so we should, and probably will in time, come to speak of the auditory as consisting of two nerves, the cochlear and the vestibular. The cochlear is the true nerve of hearing and by it the ear perceives motions or waves in the air and transmits them to the brain as sound. The vestibular nerves recognize motion of the body and transmit the sensation to the brain where it forms a part of the complex for the maintenance of equilibrium. For the maintenance of equilibrium we have necessary muscle tonus and joint reflexes, tactile sensations, visual impressions, and lastly the sensations conveyed by the vestibular nerves. We may eliminate the labyrinth element and, if the other elements are normal, equilibrium can still be properly maintained; but let the labyrinthine element be destroyed or disturbed, and then withdraw one of the other elements, and equilibrium is at once disturbed or lost.

Recalling the fact that the true labyrinth is a membranous structure floating in the bony cavities, and that in this membranous structure are to be found the endolymph channels, we know that it is the flow of this endolymph that produces stimulation of the semi-circular canals. The first neuron carries the stimulation to the internal meatus, and the second neuron from here on to Deiter's nucleus in the medulla; from here the third extends and crosses the median line and goes to the nucleus of the abducens and of the oculomotor, so that stimulation of the semi-circular canal on one side physiologically produces a stimulation of the abducens and oculomotor so stimulated; in other words, the labyrinthine function is on each side connected through Deiter's nucleus with the oculomotor and abducens centers, and by irritation of the canals will produce a nystagmus corresponding to the particular canals irritated. Thus if in narcosis we syringe one ear with cold water we will see a slow drawing of the eyes to the same side as that of the ear syringed. This is the labyrinthine stimulus communicated to the eye muscles. Now if consciousness returns there enters another component, that of the return movement, which is quicker than that caused by the labyrinthine stimulation; and this makes up the character of labyrinthine nystagmus, which differs from nystagmus of any other origin in that it is made up of one component which is slow and another fast, and in this way we are enabled to distinguish it from ocular, neurotic, hysteric, cardiac, tabetic, or toxic nystagmus. Nystagmus may be produced by turning, and if the head is upright when the patient is turned the nystagmus is horizontal. If the head is held in other than the upright position the nystagmus will be found to be co-incident in the eye with the plane which corresponded to the horizontal during the turning test. Inasmuch as fixation of the eye has a tendency to diminish the nystagmus, and a rotary nystagmus is not diminished by fixation, this has come to be that by which the test is usually made. By dropping the head so that the periphery of the cornea and iris are in a horizontal plane, a rotary nystagmus is made by turning. A rotary nystagmus is likewise produced by syringing the ear with water that is either below or above the body temperature. Thus, if cold water is used, the chill of the base of the pyramid by this causes a downward flow of the endolymph in the channels nearest the base, and, following the rule that the nystagmus is always opposite the direction of the endolymph, it produces a rotary nystagmus to the opposite side. If the hot water test is used, the flow of

the endolymph being upward and thus away from the base, the nystagmus, according to this rule, is, and so shows, towards the side syringed. Barany further proved that the greatest disturbance of the labyrinth was made when the flow of endolymph was in the direction of its ampulla, and the proportion was as two to one when the flow was in this direction as compared with the opposite, and it may be considered as demonstrated that in the production of right nystagmus the right labyrinth contributes two elements to one element of the left, and vice versa.

Now in all ordinary bodily movements we get no nystagmus because the two labyrinths are both functioning normally, and as ordinarily our movements of restitution are equal to those of the original direction, we do not have nystagmus and vertigo; but let one labyrinth be diseased, this no longer holds good and we may develop nystagmus and vertigo from ordinary movements.

Formerly Alexander in his tests measured his labyrinthine irritation from the amount of vertigo produced; now he measures it by the amount and duration of the nystagmus. A slight amount of nystagmus produces vertigo, but greater irritation of the labyrinth produces more marked nystagmus, and in addition to the vertigo there may be nausea, vomiting, and even convulsions. There can be no dizziness without nystagmus, but on the other hand there may be nystagmus, especially where it has been noted for a few days, without vertigo.

Disease of the labyrinth may be associated with increased irritability, that is, the disease has not destroyed the function of the labyrinth, but has made it irritable and is causing it to functionate with abnormal activity. In such a case there is nystagmus toward the diseased side. On the other hand, the disease may be more extensive and the labyrinth function diminished or destroyed so that it no longer participates in the maintenance of equilibrium up to its normal proportion. In this case there is nystagmus to the left side. Where there is spontaneous nystagmus it may be increased by turning or by the caloric tests which have a tendency to produce nystagmus of a similar nature, or it may be diminished, or caused to entirely disappear by turning or syringing which would tend to produce an opposite nystagmus. Spontaneous nystagmus is not present throughout the course of labyrinthine disease but is noted at its inception, and is always shown upon any sudden disturbance of this structure—as in the beginning of an infection, or when a circumscribed goes over into a diffuse suppuration.

The points that we have mentioned, if analyzed,

will show to any one that we have a basis on which to make up a symptomatology in labyrinthine disease. While we may have labyrinthine disease from otosclerosis, syphilis, leukemia, etc., yet we are now considering disease only of middle ear origin. Thus we have serous, suppurative (and infective), and hemorrhagic inflammations. These are of the true labyrinth structures, though in addition there may be disease of the structures about the labyrinth—osteitis, osteomyelitis, necrosis, sequestra, and cholesteatoma. From what has gone before it can be seen that if the bony capsule of the horizontal canal is eroded we may have a penetration of this bony wall, but if it does not extend beyond the bone that the labyrinthine irritability and function will be preserved. It is characteristic whenever the labyrinth is penetrated by an erosion in its walls that there is one severe attack of dizziness. This erosion of the bone we speak of as fistula, and Alexander has demonstrated what are called the fistula symptoms, namely, if the air in the external meatus in a case of this kind is compressed, this compression through the erosion causes a flow of endolymph in the tube and produces nystagmus to same side. If the air be rarified a contrary nystagmus will be produced to opposite side. It is remotely possible a cholesteatoma may grow so slowly and invade the labyrinth so gradually that this history may be wanting, and the fistula symptoms absent. When the disease penetrates more deeply through the canals, or penetrates the oval window or the cochlea, labyrinthine function is quickly lost. Whenever in the course of a chronic suppurative otitis media the hearing is completely and suddenly lost it may be counted as sure that the labyrinth has been penetrated and labyrinthine infection taken place.

The radical mastoid operation has established itself as a proper procedure in chronic middle ear suppuration. Nagle and Cobb, of Boston, have just reported a series of forty cases treated by a somewhat different technique with autovaccines, and claimed cure in thirty-nine of the forty cases. This report bears all the evidence of scientific basis, yet the findings are so absolutely and unexpectedly good as compared with those of all others who have worked on this line that further time will be necessary before these can be considered results to be obtained by others with the same treatment for suppurative cases. Under all ordinary percentages there would have been a number of cholesteatomatous cases and deep fistulous invasion of the mastoid in this number of cases, and it seems contrary to all surgical experience that there should be com-

plete healing, even if all bacterial activity were eliminated. Taking it for granted, therefore, that the radical operation will be adopted from time to time as the procedure for the treatment of cases of chronic suppuration and knowing its necessity in acute exacerbations of chronic disease, one must know in what way his surgery will be influenced by the presence of labyrinthine disease and what effect his operation will have upon the labyrinthine element. These points have been carefully studied through a considerable series of cases in the Vienna clinics of Alexander, Neuman and Urbantitsch. The meningitis of labyrinthine origin is usually of a more virulent and fatal type than other forms of otitic meningitis. Alexander has seen recovery in a few cases of a type he calls labyrinthic meningitis, which he explains by supposing antitoxins to the bacteria having been formed during the latent labyrinthine suppuration. The danger of labyrinthine disease lies not in the lesion itself, but in the extension of its infection intracranially.

Opening up the labyrinth is known as labyrinthotomy and the removal or extirpation of the labyrinth as labyrinthectomy, though it is not possible to absolutely obliterate the labyrinth, as the preservation of the facial nerve requires, leaving a portion intact.

The operation to be adopted of course depends upon the form of disease of the bone and labyrinth which is present, its drainage, however, being always an essential feature of the operation performed. First, if there is present a diffuse suppurative infective labyrinthitis and there is danger of intracranial infection, and this without fistula, a radical labyrinthine operation, if any operation at all, must be done, *and the case should be operated*. In such a case one has to open two cranial fossae, and has to operate while the aqueductus vestibulae, aqueductus cochlea, and the internal auditory meatus are open. Second, if there is diffuse labyrinthine suppuration with fistula and loss of labyrinthine function, and with only extracranial symptoms, no operation should be performed, because at the time there is no indication of any intracranial disease and operation would offer opportunity, and probably lead to, intracranial infection. These are cases in which we usually find persistent fetid secretion. If there is more than circumscribed labyrinthitis with fistula the middle ear disease should not be operated upon unless there is some special indication, and the indication for operation is a relative one; that is, if the middle disease is operated by a radical, the labyrinth should be opened also. An uncomplicated labyrinth suppuration does not

call for surgery, as in our schools for the deaf we find that not less than 50 per cent of the cases of acquired deafness represent cases of healed labyrinthine suppuration. In all save the first of these types the labyrinth is a condition receptive for acute infection and thus favorable conditions may lead to intracranial infection. Where fistula exists without loss of function of the labyrinth the radical mastoid, when called for, can be done, without additional procedure, as it simply clears up the infected field around the erosion into the canal.

This classification of labyrinth disease is yet a new one, but it is important. No greater mistake could be made than to think that every case with labyrinth symptoms called for a labyrinth operation. Quite a few of the cases that have been reported seem to have been those where erosion of the horizontal canal was the only manifestation of disease and was found on performance of the radical. In some of these undoubtedly the case was only of peri-labyrinthine disease and no operation beyond opening of the mastoid was called for.

The technique of operation to be adopted in any case must depend upon the character of the lesions, which, from what has been stated before, it may be seen, differ. When in a case the tests show that a diffuse infective labyrinthitis is present the operation upon the mastoid and temporal bone must be begun with the idea of going on to complete drainage of the labyrinth. The manner in which this should be done should not be determined by the operator until he has performed his radical, which is the necessary beginning of his operative procedure. Should he find when this has been done that he has an erosion of the semi-circular canal it would seem that this ought to be the natural route for his further penetration of the bone.

Richards has described the technique of his route of entrance better, perhaps, than any one could who has simply worked it out on the cadaver, as he has had occasion to perform the operation several times on his patients. The points to be borne in mind are that aside from the proper and sufficient penetration into the canals and of the solid angle through into the vestibule, it is necessary to preserve from traumatism the facial nerve lying in the Fallopian canal and sporan, which seriously hampers the freedom of the operator in his opening the canals. Where the operator wishes to choose this route in a case without fistula he may feel a little less certain, owing to the necessity of his locating the horizontal canal from anatomical landmarks which may be slightly changed by erosion not

sufficient to penetrate the canal. In this case he is able to determine the proper level for making his opening by having fully removed the angle of bone at the hypotympanum and cut down over the sporon in the posterior wall of the meatus until he has approached as close as safety permits, the dense bone immediately protecting the facial nerve. He then can expect to find the summit of the horizontal canal a trifle above and behind this facial sporon, and by chiseling in a way to penetrate the tissues closely above and behind the sporon without injuring the nerve, he must necessarily encounter the canal. The canal once opened, it is a matter of patience and care to follow it forward and inward to the solid angle where it penetrates the vestibule. The posterior canal is found above and behind the horizontal at a slightly greater depth, as shown in the charts. The anterior vertical is more difficult of entrance than either of the others because of its plane being transverse to the line of approach to it, and the necessarily small space in which the instruments of the operator can work at this depth. If there is not too much sclerosis of the bone the operator can recognize this canal by following the inner table in the direction in which the canal is to be found, and finding the dense bone of the labyrinthine capsule in close contact with the inner table at the depth at which the canal lies. For its easier penetration a curved or bent gouge is much preferable to a straight instrument. This method of Richards contemplates the free laying open of the summit of the posterior, and following the horizontal and anterior canals until they lead into the solid angle, and by opening through it to fully expose the vestibule above and behind the Fallopian canal. The hypotympanum having been exposed beforehand, the operator should be able to have the oval window in view, and after the canals have been opened into the vestibule he can then enlarge the oval window so as to make a better point of entrance into the vestibule at this point. In opening the cochlea the danger should be borne in mind of fracturing its stem in such a way that it may damage the inner wall of the vestibule at the internal meatus. This accident happened in two of Richards' cases and its immediate consequence was a filling up of the mastoid wound cavity with cerebrospinal fluid which kept oozing through the fractured bone and proved to be the path by which a septic meningitis developed, leading to the death of the patient. For this reason the point of a small rounded chisel should be placed on the summit of the promontory just anterior to the oval window, its point being aimed downward and

forward, and with the gentlest touch necessary one fractures the thin layer of bone which covers the cochlea. It takes but the lightest stroke of the mallet to fracture this covering of the cochlea, and the penetration of the chisel should be made only sufficient to take off its covering and not to fracture the stem. It is only by experience in the dead room that one can learn the amount of resistance of the bony tissue at this point and be prepared to make his penetration sufficient to avoid the danger above referred to. This lower turn of the cochlea having been exposed, the shell of bone towards the vestibule can be removed so as to connect the two cavities, and if necessary the cover towards the apex can likewise be removed. In working in this direction the immediate proximity of the carotid artery beyond the apex of the cochlea should not be forgotten. However, the density of the bone in this situation is usually sufficient to be a protection and this danger is not one that should interfere with the operator's work in this direction. It will be seen from this that the vestibule has been opened both in the region of the round window and connected with the cochlear space. This opening leads freely through, behind and above the Fallopian so as to leave the facial as a bridge passing over the vestibular cavity. The frequent use of small gauze pledgets moistened in adrenalin solution will in many cases serve to diminish oozing so that the field of operation is fairly free from hemorrhage, and the various anatomical landmarks thus more readily recognized.

The Jansen-Neumann operation is to be resorted to in those critical cases of complicated mastoid disease in which the labyrinth is undoubtedly involved in a diffuse infective process, and where also there is the probability of lesions on the cranial side of the inner table. It is presumed that the radical mastoid operation has been performed as the first step of the procedure. For the performance of this, to those who have not had an experience so large as to develop settled methods of their own, I cannot help but recommend, as best adapted to make clear the anatomical problems concerned, the directions laid down by Neumann in his classes in mastoid surgery. With the completion of the radical operation the sinus is next laid bare. For this it is well to remember that sharp chisels should be used for the outer cortex and dull ones for the inner table. One begins with the posterior margin of the mastoid wound at the level of the upper portion of the external meatus and cuts through the outer table, extending the wound backward until the inner table is met, which is

then penetrated by a dull chisel which will not cut the dura or into the sinus. The opening is then enlarged so as to fully expose the sinus back and upward toward the knee and then down toward the bulb, and when this latter is done the entire mastoid tip should be removed. The middle fossa can then be exposed by enlarging the upper limits of the wound, cutting through the outer table directly over the antrum or posterior meatal wall until the inner table is reached, and then removed. This removal of the inner table is then continued inward and forward until the roof of the antrum and epitympanum are opened and the dura fully exposed. When this has been done it leaves a triangle of bone between the regions of dura thus exposed, that is between that of the floor of the middle fossa and the region of the lateral sinus. This is the triangle of Trautmann. This triangle is bounded in front by the prominence of the semi-circular canals and the facial sporon. Along its upper border is the superior petrosal sinus and below it the lateral sinus. This procedure has exposed both the middle fossa, the posterior fossa, and lateral sinus, and now the direct procedure of entering the labyrinth is begun. The promontory of the horizontal canal marks the upper level of the field to be exposed, and the floor of the external meatus its lower level, while the penetration of the field of the operation must be carried to a depth equal to that of the vestibule. The chisel is placed upon the sloping surface of the bone behind the facial sporon a sufficient distance to preserve this nerve from injury, and the bone removed as carefully as possible to prevent its spicules from damaging the dura or the surface of the sinus. As the exposed bone surface nears the region in which the canals lie, two and finally three, openings should appear—the non-ampullar end of the horizontal canal, and the two openings of the cut posterior canal. It is the first of these which should be the most freely laid open so that the probe can be passed through to the vestibule. When this probe passed freely through in the direction of the vestibule the promontory is then to be opened according to the rules laid down in the description of the Richards operation, the end of the chisel being placed just below the oval window and directed inward, slightly forward, and even more slightly downward, and with a gentle tap of the mallet the bone broken over the cochlea. When this is done, if the canals have been sufficiently exposed, one should be able to pass a bent probe through from either direction, but preferably from the canals forward so that its end can be seen at the opposite side of the facial ridge presenting in the

vestibule. During the exposure of the canals posteriorly it is necessary, or best, to entirely remove the remaining bridge of bone of the triangle of Trautmann which intervenes between the two canal fossae and expose the angle line along which runs the superior petrosal sinus. If a fistula exists in the horizontal canal it can also be enlarged to make a free drainage.

As can be imagined from its description, and as can be better imagined from the performance of this operation on the cadaver, it forms a procedure of major surgical importance and is not to be attempted save on the best surgical indications, and after the operation has been studied out and performed on the cadaver. The minor labyrinth procedure of enlarging the fistula in the horizontal canal until this canal is laid open freely anteriorly into the vestibule, the operation of Heinsberg, is not a procedure of such importance and can be successfully performed with less difficulty of technique, and neither the conditions which call for it, nor the operation itself, should jeopardize the life of the patient.

The proximity of the facial nerve to the field to be exposed renders it liable to damage from the operation as well as from the encroachments of the disease upon its protecting canal. Dehiscence of the bone over the nerve as it passes through the supero-posterior portion of the inner middle ear wall is frequent in children and is the usual explanation of the cases of facial paralysis which spontaneously appear in acute otitis media. And in the adult the bone of the Fallopiian canal may be so thin that the pressure of an instrument, as the Stacke protector, or even of firm packing gauze, may fracture it, and lead to traumatic paralysis.

While nothing can replace the knowledge gained only by long and continued study of the temporal bone and its exploration in the dead room, yet even this knowledge may be hampered if on the living the operator contents himself with too small an incision in the soft parts, and he does not sufficiently enlarge the boundaries of his opening in external cortex of the bone. Many people have died from too small an incision at the hands of the operator, and probably no one from too large a one.

On the other hand, the bone infection may require that the surgeon go down to the facial and perhaps completely bare it, leaving it suspended as a cord across and in front of the vestibular cavity. Even in such a case care to not excessively irritate it, and its protection in various ways, may be followed in five to six months by partial or complete restoration of function. But here we may say if recovery does not take place,

better a patient alive with facial paralysis than one dead, without it. Richards says in every case of his in which entire labyrinth was opened, there was facial paralysis, but all recovered, generally in four to five months after operation. In this connection it may be well to note the reports of Sydenham and of Marsh (*British Medical Journal*, May 8, 1909, and June 5, 1909). They report cases where the facial had in part or whole been torn in the mastoid operation, and the torn ends teased as nearly as possible to their proper position, when two or three fine strands of chromicized catgut were laid around the torn ends and into the openings of the facial canal. This was covered with gutta percha tissue and protected in subsequent dressings. In another case where the cut ends of the nerve were separated by a distance of one-third to one-half an inch, silk worm gut was used. In all these cases function was restored, the shortest time being in six weeks, but usually in from three to four months.

The mortality from labyrinthine suppuration has been estimated at from 15 to 20 per cent (Heinsberg). But these cases have been subject to careful analysis for so short a time that any statistics can be questioned as to accuracy. And when it comes to the statistics as to mortality from the operation we are confronted by a greater difficulty in getting at true facts. The lapse of a number of years, and carefully collated reports from various clinics and operators will be needed before figures of dependability can be had.

In Richards' eleven cases, four were in acute and seven in chronic suppuration. Three of the cases died, two from septic meningitis, and one from jugular thrombosis. According to Jansen, of all deaths in Lucae's clinic, 8.3 per cent were due to labyrinth suppuration. Fifty-seven cases were operated between '99 and 1906, and eleven of these died—four from labyrinth suppuration, two from septic meningitis, one from serous meningitis and one from cerebral abscess. Of seven cases where vestibule, s. c. c. and cochlea were opened in all, only one patient recovered. It may be said, though, that in fistula with preservation of function the prognosis is absolutely good. In diffuse infective suppuration operation increases the gravity of the disease and should not be performed unless intracranial symptoms are present, when both the radical mastoid and labyrinth operation should be done.

It can be seen, therefore, that in all cases of middle ear suppuration before proceeding to open the mastoid we should acquaint ourselves through the new tests now given with the condition of

the labyrinth, and govern our surgical procedures by the results obtained in these tests. In acute labyrinth suppuration it should be remembered that the waiting standpoint is a good one; being quite the reverse of that to be adopted in sinus thrombosis or pyemia, where early operation is always to be sought.

In acute suppurative otitis media we ordinarily anticipate our complications in the posterior fossa; while on the other hand, in chronic suppuration, unless there are labyrinthine symptoms, we look for these complications in the middle fossa. The natural relations of the labyrinth are with the posterior fossa.

Report of a case of middle ear suppuration, radical mastoid operation, diffuse infective labyrinthitis, meningitis and death. J. F., aged nine years, was first seen August 12, 1908, with a history of a suppurative right ear for the past six months, and a less distinct history of a preceding suppuration earlier in life. The child was also subject to colds and was a mouth breather. Examination showed the right canal filled with polyps and a foul smelling purulent discharge. There was marked lymphoid disease both in the fauces and post-nasal space. At this first visit the aural polypi were removed so that there was a fair clearing down to the tympanic cavity, in which no indication of the drum membrane was found, and the inner wall of the tympanum covered with granulations. September 3 an operation was performed for the removal of the tonsils and post-nasal adenoids under ethyl bromide-ether anesthesia. October 2 at my clinic a radical mastoid operation was performed. The mastoid cells were found eroded by a large cholesteatomatous plug, the cells in the lower part of the process being almost entirely destroyed down to the tip. No remains of the ossicles were found. There was no indication of fistula into the horizontal canal but the region of the oval window and the posterior wall of the tympanic cavity about the facial spuron showed the presence of small granulations and the probe detected rough bone. The entire bone surface was freshened as was indicated surgically and the usual plastic made, and the wound closed posteriorly. At the first dressing a marked odor was present, so that the lower portion of the external wound was reopened so as to allow ample drainage and permit ready access to the cavity. Despite frequent dressings and cleansing, odor persisted. Healing seemed to be going on rapidly but more discharge than normal was found in the wound cavity, but two weeks following the operation the patient was discharged from the hospital apparently doing well. October 22 his physician re-

ported that the child was nauseated and markedly dizzy. He was asked to send the patient in at once to the hospital, and it was found that vertigo and nausea, beginning facial paralysis, and meningeal symptoms were present. The patient was seen in consultation by Dr. Waters. The day following the patient was etherized and the wound re-opened and all the bone surface again uncovered. The lateral sinus and middle fossa were uncovered. The region of the oval window was thoroughly curetted as well as the hypotympanum. The cavity was packed but no attempt made to close the external wound again. The child's temperature, with slight variations, kept in the neighborhood of 101 degrees until the seventh day after re-operation, when it dropped to 99 degrees, but the day following was up to 101 degrees again, and on the ninth day rose rapidly to 103 degrees, pulse to 140, respirations to 44, and death.

The case was undoubtedly one in which a latent labyrinthine suppuration, which had entered by way of the oval window, became diffuse in the face of the operative procedures and extended by way of the internal auditory meatus to the meninges, causing death from this complication.

CEREBELLAR ABSCESS.

WM. MITHOEFER, M. D.
Cincinnati.

[Read before the Ohio State Medical Association.]

There is no one symptom pathognomonic of cerebellar abscess, as all symptoms characteristic of this disease may result from other intracranial complications or mastoiditis. It is therefore necessary in order to arrive at an early diagnosis of a brain abscess to make a careful examination of our cases of mastoiditis especially the chronic type, and to keep them under close observation if there is any suspicion of intracranial disease, for it is only the early diagnosis, in conjunction with the improved operative technic of today which will reduce the mortality rate of this disease.

The suppurative process may reach the cerebellum in various ways. There may be (1) a direct extension from the mastoid cavity through the dura on either side of the sigmoid sinus, (2) by way of the labyrinth which according to Neumann occurs in 50 per cent. of the cases, (3) aqueductus vestibuli, (4) internal auditory meatus, (5) along the perivascular sheaths. Indirectly the infective process may be carried

through emboli from the arterial vessels, the thrombosis of the bloodvessels originating from a diseased middle ear or mastoid cavity, from a perisinus or extra dural abscess of the posterior fossa. An infective thrombus in the sigmoid sinus also acts as a causative factor, the pathogenic organisms traveling along the cerebellar veins for the current of blood in the superficial veins may flow in either direction.

It must be remembered in connection with this question of indirect extension of the infectious material that a brain abscess may form as a result of an acute mastoiditis, the findings at the time of operation for brain abscess showing the mastoid cells apparently healthy, with no mucous membrane or bone disease. Therefore with a history of a discharging ear which had healed, and with symptoms suggesting a brain abscess, we are justified in exploring the brain notwithstanding the fact that the findings during the mastoid operation are negative. In chronic mastoiditis, the eburnization of the cortex, and the presence of cholesteatoma add greatly to the danger of the development of a brain abscess; to this must be added the virulence of the pathogenic organisms and the effect surgical trauma may have on the causation of these abscesses.

Cerebellar abscesses develop slowly, and are usually of small size, consequently positive symptoms are seldom present. It is undoubtedly true that in some patients the abscess begins with a chill, but unless the patient is under close observation this symptom is easily overlooked. The slow development prevents an increase in the intracranial pressure, or it may happen that another part of the cerebellum takes up the work of the part affected, for the microscopical structure of the cerebellar hemisphere is the same all over, and it is therefore very easy for one part to take up the function of the other. When this compensation takes place the picture is obscured, but if symptoms do occur, it is highly probable they are caused by an associated encephalitis, an oedema, or serous meningitis. With each spread of the abscess, however, there may occur symptoms of increased intracranial pressure, and we may be aided in arriving at a diagnosis by noticing a change in the disposition of the patient who now complains of more severe headache, has lost in weight, has some fever and slow pulse. These symptoms especially in chronic mastoiditis must always be looked upon with suspicion. If we operate when no definite symptoms as to location are present it would be sheer luck if we reached the abscess in the exploration. There may be no external evidence of a mastoiditis, and still there may be develop-

ing intracranial complication. A patient suffering with a chronic ear disease in whom headache, vertigo and tinnitus form the prominent symptoms, must be carefully examined, and we may be rewarded in our endeavors by finding certain group of symptoms which would make us very suspicious of a cerebellar abscess.

The function of the cerebellum is the coordination of locomotor movements, and it is evident therefore one of the first signs of cerebellar disease would be an incoordination of these movements, provided another part of the cerebellum or cerebrum does not take up the function of the part affected. Consequently in our examination we must attempt to show if possible the presence of defective coordination. A simple and valuable test consists in having the patient do rapid alternating movements of pronation and supination of the arm and forearm. These movements are often irregular and incoordinated on the side of the affected ear. Furthermore there may be an unsteady gait, examination of the eyes may reveal a beginning optic neuritis, or there may be an alteration of the deep reflexes. When these symptoms are present, although the patient at the time of examination may not seem seriously ill, it is advisable to suggest operation before positive symptoms referable to cerebellar abscess become manifest.

If we have a patient with a discharging ear, or one giving a history of having had some ear trouble in whom there is present vestibular nystagmus, ataxia, vertigo, vomiting, optic neuritis, severe headache in the occipital or frontal regions, stiffness of the muscles of the neck, we may feel almost certain we are dealing with an abscess of the cerebellum, but unfortunately in the majority of cases operative interference at this stage is often of no avail. The diagnosis becomes positive if during the mastoid operation pathologic changes are found which show a spread of the disease to the cerebellum.

The difficulty in arriving at a diagnosis depends also on the fact that circumscribed labyrinthitis, extra dural abscess of the posterior fossa, and pachymeningitis often produce symptoms similar to a cerebellar abscess. Another important reason a diagnosis is difficult lies in the fact that the sensorium is usually free except in the terminal stage, and lastly it happens that the symptoms of retention of pus in the mastoid cavity are often so pronounced as to mask the less severe manifestations of a brain abscess. Such a condition was present in the following case:

The patient, a girl 11 years of age, had a discharging ear following measles four years ago.

March 13, 1910, she had a chill, fever and severe pain in the affected ear. Three days later, the symptoms continuing, I was called to see the case. Examination revealed a small quantity of foul smelling pus in the external auditory canal, a marginal perforation involving Shrapnell's membrane, the posterior canal wall intact, temperature 101, pulse 80, headache, severe pain or pressure over the mastoid region, and vomiting, which occurred independent of the ingestion of food. The following day the severe headache continued, but vomiting ceased. The caloric test with cold water positive, but the nystagmus rather weak. No spontaneous nystagmus.

March 14, 1910. Operative findings—sclerotic cortex, small antrum containing fetid pus, a perisinus abscess with the sinus displaced forward; the wall of the sinus gangrenous extra dural abscess in the middle fossa, an extra dural abscess in the posterior fossa anterior to the sinus. During the removal of bone over the sinus rupture of the vessel occurred, but only a small amount of blood escaped, the sinus was therefore incised, but free bleeding took place at both ends. Wound packed and dressing applied.

March 19, 1910. Fifteen hours after operation there was a sudden cessation of respiration. The internes immediately began artificial respiration, pulse 120, full and strong. The dressings were removed, but the condition remained the same. The patient was then taken to the operating room; while artificial respiration was continued, the dura over the cerebellum anterior to the sinus was incised, a knife thrust into the brain tissue, and a small quantity of pus escaped. The cavity was drained, but the evacuation of the abscess did not improve the condition and death followed. The fatal termination was either the result of pressure of the abscess and surrounding oedema, or rupture into the fourth ventricle, in all probability it was the last named complication which occurred. The extra dural abscesses and the retention of pus in the mastoid were sufficient to cause the severe symptoms, and in consequence our suspicions were not aroused until too late.

To this case may be added another which differs from the first in so far that typical symptoms of a cerebellar abscess were present so that a positive diagnosis could be made; however, as so often happens, the symptoms did not appear until the abscess had reached a large size.

C. H., male, age 21, always enjoyed good health with the exception of a discharging ear which followed measles in childhood. In the summer and autumn of 1908 he suffered pain more or less

constant in the region of the affected ear, but did not seek medical advice until December 28, 1908, at which time the pain was almost unbearable, and in addition there occurred chills, fever and profuse sweating. The temperature fluctuated, reaching 104 degrees F. to 105 degrees F., preceded by a chill, and followed by a profuse sweat with a decline of the fever to 99.2-5. These wide excursions of fever occurred three times in 36 hours. There was severe pain on pressure both over the mastoid, and in the region of the internal jugular. A large polyp completely filled the external auditory meatus, and prevented inspection of the tympanic membrane. In view of the foregoing facts a diagnosis of Lateral Sinus Thrombosis was made and operation advised. The patient was removed to the Good Samaritan Hospital, and the blood examination made at this time showed Leucocytes 14,000 Polynuclear 76 per cent.

Operative Findings.—Upon opening the sclerotic cortex a large quantity of fetid pulsating pus escaped. The mastoid cells were absent, except at the tip, then entire space being converted into one large abscess cavity, with the sigmoid sinus displaced far forward and exposed to the extent of one inch. The wall of the sinus was thick, and gangrenous, but showed slight pulsation. The radical operation was completed, and the sinus opened, but free bleeding occurred at both ends. The post-operative period for three weeks was uneventful, the temperature curve was normal, and the patient left the hospital on the nineteenth day.

January 22, 1909. Twenty-six days after operation patient complained of dizziness, nausea and vomiting. The mastoid wound appeared healthy,

Hearing tests:

Upper Tone Limit normal.

Lower Tone Limit, elevated, 256v. D.

Whispered Voice, 4 feet.

Acoumeter, 3 feet.

Caloric test not made. The following day severe headache localized chiefly in the frontal region, temperature 99.2-5, pulse 56, nystagmus to diseased side, ataxia vertigo pronounced, projectile vomiting at frequent intervals, inclination of head to diseased side. Dr. Walter Forchheimer examined the eyes, and his report was as follows:

"External muscles of eyes normal, pupillary reaction normal, pupils about 4 m. m. in diameter. Left papilla swollen, margins blurred, veins less tortuous, small hemorrhage to outer side of papilla, probably few months old. Diagnosis.—Light degree of optic neuritis of either eye."

Second Operation.—The mastoid wound was

enlarged posterior to the sigmoid sinus, and a sufficient amount of bone removed over the region of the cerebellum. The dura bulged, was adherent, and had a greenish-yellow color. It was incised. A slender knife thrust into the cerebellum in a direction forward and inward, and a large quantity of thick fetid pus escaped. The abscess was situated superficially and mixed with the pus was a considerable quantity of necrotic brain tissue. The small space existing anterior to the sinus prevented a counter opening being made in this locality. A gauze drain was now inserted, and a circular iodoform packing placed over the dura.

For three days following the operation the condition of the patient was very satisfactory. On the fourth day, however, there was some retention of pus, the surrounding brain tissue was prolapsed, showed inflammatory oedema, and in consequence it was found difficult to introduce the gauze drain. On the following day vomiting which had not taken place since the operation again became a prominent symptom; there was violent headache, rigidity of the muscles of the neck, Kernig's sign and dilated pupils. Death resulted 48 hours later, undoubtedly from diffuse purulent leptomeningitis and encephalitis. Post-mortem not obtainable.

This case presents several interesting features. In the first place, if the abscess were chronic, and it is highly probable it was, it is remarkable that twenty-one days elapsed from the time of operation before any symptoms indicative of a cerebellar abscess became manifest, the patient in the meantime having a normal post-operative period. This total absence of symptoms may be partly accounted for by the superficial position the abscess occupied. The large size of the abscess would speak for its chronicity, although an acute abscess with rapid destruction of brain tissue may reach a large size in a short space of time. Furthermore it is worthy of note that cerebellar abscesses as a rule are small, and that in this instance we were dealing with one which was of extremely large size. The only explanation which may be given regarding the lack of symptoms is the fact that after destruction of a large part of the cerebellum compensation takes place from the motor region of the cerebrum.

Lastly, the difficulty encountered in the introduction of gauze during the after treatment makes it highly probable that the brain tissue was injured in the attempt. The difficulty may be overcome by the use of the encephaloscope of Whiting and my experience in this case forms a strong argument for the use of this instrument in future work on brain abscesses.

DISCUSSION.

J. M. Ingersoll, Cleveland: In the first paper by Dr. Chamberlin mention was made of the nystagmus resulting from compression and rarefaction of the air in the external auditory canal if a fistula was present in the lateral labyrinthine wall. Several points are to be considered when studying this form of nystagmus. If the Eustachian tube is freely open, it would prevent any increase or decrease of pressure being transmitted to the internal ear as the middle ear cavity would not be a closed cavity and the air pressure would escape through the Eustachian tube. Granulation tissue growing over the labyrinthine fistula might also interfere with nystagmus caused by compression. In using the pneumatic speculum it is easier to increase the pressure than to decrease it by suction so that the stimulation caused by pressure and the resulting nystagmus would probably be greater than that caused by suction.

The symptom of nystagmus in relation to diseases of the internal ear is a very important one and the help which we may get by using it in making a differential diagnosis between a lesion of the internal ear and a cerebellar tumor or abscess is very valuable.

In the second paper Dr. Brown mentioned a paper by Dr. Cobb on vaccine therapy in middle ear suppuration and spoke of the high percentage of cures which Dr. Cobb had obtained. I had the pleasure of hearing this paper in Washington and also of talking with Dr. Cobb about his results. He said that the vaccine was used in selected cases and that naturally the percentage of cures would be higher on this account. My own experience has been the same. In selected cases the vaccine therapy has given me some very pleasing results. We can scarcely expect, however, that it will work favorably in cases where there is considerable bony necrosis or a cholesteatomatous mass. Such conditions need surgical treatment.

The last paper brought out facts so well known to all of us—that there is frequently great difficulty in making a diagnosis of cerebellar abscess. I think we are all occasionally surprised to find how much brain involvement may be present in cases which appear to be simple mastoid infections.

Dr. Iglauer: These three papers cover so wide a field that it is difficult to discuss them. There are, however, a few points that I would like to mention. Unless one studies the question of nystagmus on a physiological basis, it is very difficult to remember which way the eyes should turn in response to a given test. Physiological diagrams will aid very greatly in overcoming these difficulties. But very often we can remember the tests by adopting a little mental jugglery. For example: In the caloric test one might suppose that the warm water injected into the patient's ear is more agreeable than the cold water, and that, therefore, the patient turns his eyes (nystagmus) toward the agreeable and away from the disagreeable sensation. Neumann compares the vestibular control of the eye to driving a team of horses. If one pulls harder on the left rein (excitation of the left labyrinth) the horses (nystagmus) will turn to the left and vice versa, and it therefore seems as if Neumann himself

must resort to mental tricks of this kind to remember the direction of the nystagmus.

I believe we would all agree with Dr. Brown that operation would be indicated in every case of profuse suppuration of the labyrinth, with or without the signs of intracranial complications.

None of the gentlemen made any mention of testing the cochlear end of the nerve separately. One of the most characteristic symptoms of destruction of the labyrinth is complete loss of hearing. In order to determine whether the hearing is absolutely destroyed in one ear, it is necessary to employ a noisemaker (Laerm-Apparat) which must be introduced into the sound ear in order to exclude it when testing the affected ear. By making a great noise in the good ear, if the patient hears at all, he hears with the bad ear when the noisemaker is used. Other things being equal, if the hearing is entirely destroyed, one would not hesitate so long in opening the labyrinth.

As to the operative procedures, it seems to me that the method of Neumann in approaching the semi-circular canals from the rear is much better than the method of Richards, who makes such an extensive exposure of the facial nerve. In the former method the nerve is allowed to remain undisturbed in a bridge of sound bone.

I had a case this winter confirming Dr. Mithoefer's statement, that a brain abscess may exist secondary to middle ear infection and yet on opening the mastoid, there may be no signs of trouble. The patient had a history of acute middle ear infection, which had occurred about six months before I saw him and which had apparently subsided. Owing to the symptoms of brain abscess, which he presented, I opened the mastoid, hoping to find the tract leading into the brain, but found the mastoid in an apparently normal condition. The neurologist in the case did not deem it advisable to explore the brain to any extent from the mastoid wound. About a month later the patient, although he still presented symptoms of abscess, insisted upon leaving the hospital. A few days after his return home he suddenly became unconscious with high fever and rapid pulse. The general surgeon, who was called in, succeeded in finding the brain abscess, but not in saving the patient's life, as the abscess had undoubtedly ruptured into the lateral ventricle.

Dr. Neumann, while in Cincinnati, had a patient who presented the symptoms of a circumscribed labyrinthitis and of abscess in the temporo-sphenoidal lobe. He drained the abscess and the patient improved for several weeks, when he returned to the hospital, presenting symptoms pointing to cerebellar abscess, from which he succumbed and which was found on the post-mortem table. A cause of this kind illustrates the great difficulty in diagnosing and treating brain abscess.

Dr. Large: I wish to congratulate the Society on securing such able papers as the three on this subject. I think all of them have been very comprehensive.

I would like to state one of the troubles I had with the operation of exenteration of labyrinth. When I got into the posterior fossa in front of the sinus, my assistant making traction, made too much and we got a small perforation in the

meninges with escape of cerebro-spinal fluid; we then had to do the Richard's operation.

I think the Neumann-Jansen operation is better than the Richards, because you are working further away from the nerve. In doing the former operation you must be very careful in keeping the point of the chisel directed from the facial canal, and the blows of the mallet must be gentle, because there is always danger of fracturing the bridge.

The cause of suppuration of the labyrinth may be due to our being too conservative in our treatment of suppurative otitis media.

The question arises, are we doing the simple or radical mastoid often enough?

In those cases of suppuration following acute otitis media I have made it a practice to open the mastoid cells and antrum if discharge lasts over six weeks, that is, if the case has had antiseptic treatment, including vaccine therapy. By so doing you save the case from becoming a chronic one, and you not only save the hearing, but the patient is freed from these most serious cranial complications.

Dr. Chamberlain: Just one point, the one mentioned by Dr. Large. I think we are culpable in our hesitancy to operate in acute cases of otitis, where the discharge has persisted for longer than six weeks. Dr. Ingersoll and I, in two recent cases, have had ample opportunity to establish the wisdom of this procedure. Both of these cases were operated simply because the discharge had persisted more than six weeks. Extradural abscesses were found in both cases. They presented absolutely no indication of an intra-cranial involvement. We were both very much surprised to find these abscesses. These cases if left, would have necessitated an operation later. As it was, the operation was performed under very favorable circumstances, whereas if operated later the conditions might have been decidedly unfavorable. One of these cases healed in two weeks—the other in four.

Dr. Murphy: To Arthur E. J. Barker, of London, in 1866, belongs the honor of having been the first to open the skull, and remove a collection of pus from the temporo-sphenoidal lobe with the effect of saving the patient's life. In this case healthy brain tissue was penetrated to the depth of half an inch, when fetid gas and pus were excavated. This was an epoch making period in brain surgery.

About this time William MacEwen, of Glasgow, brought out his classical work on Pyogenic Infective Diseases of the Brain and Spinal Cord. He regards an uncomplicated cerebral abscess, early recognized, accurately localized, and promptly operated upon, as one of the most satisfactory of all intra-cranial lesions, the patient at once be rescued from a perilous condition and usually restored to sound health. On the other hand when these cases are allowed to advance uninterruptedly beyond a certain limit, the whole cerebro-spinal axis is involved and its function benumbed, while the general system is rendered so toxic that surgical aid is well nigh powerless. Since the majority of pyogenic affections of the

brain arise from neglected otitis media, they ought to be regarded as preventable diseases, and their prophylaxis scrupulously attended to.

MacEwen's writings gave a powerful stimulus to brain surgery, and since that time there has been a brilliant ever increasing record of life saving work in this department of surgery. Since eighty-five per cent. of brain abscesses are due to infections from the middle ear, those of us who are treating that region are most apt to meet with these cases, so that the question of diagnosis becomes a very important one. We are now able to reach and deal successfully in many instances with the purulent formations at the base of the brain, either extra or sub-dural abscesses, infective thrombosis of the lateral sinus or internal jugular vein. Ballance, of London, who has written much concerning the diagnosis and operative treatment of brain lesions, very aptly likens the function of the cerebellum to those of an orchestra leader. He does not play any instrument nor energize any performer, but it is through his influence that the work of each individual performer is exactly adapted to that of every other.

Without such guidance, though all the parts might be played correctly as parts, there would be "asynergia" and the effect on the audience would differ from that intended by the composer.

Muscular movement is in some such way co-ordinated through the cerebellum, as the cerebellum is the reflex center of the sensorimotor system concerned in equilibration, co-ordination of muscular movement and the sense of orientation. It receives impressions from the vestibular apparatus, the eyes, the muscles and even the skin. Let there be a unilateral lesion of the cerebellum and the muscular tonus furnished by this side of the cerebellum will be wanting, while the muscles from the other side will be acting; hence we will have the incurvation of the trunk, loss of equilibrium, oscillation and falling towards the side of the lesion.

The most common symptoms are headache, vomiting, vertigo, staggering gait and dimness of vision from optic neuritis, which often occurs very early in the disease. The headache is usually occipital but may be frontal. Vertigo is an early sign, comes on with change of position, is associated with utter faintness and causes a tendency to fall independent of staggering. The vertigo is constant and intense.

Dr. Mithoefer: I have nothing to add to what has been said, except to emphasize the importance of placing your patient under close observation if a brain abscess is suspected. An early diagnosis can only be made after a careful and complete examination. When pronounced symptoms of a brain abscess appear, the diagnosis becomes easy, but unfortunately when these patients are operated on death usually results. Therefore in order to reduce the mortality rate of this disease we must use such means as will aid us in arriving at an early diagnosis.

Small petechiae on the skin may indicate a sepsis of obscure origin.—Surgical Suggestions.

BOOK REVIEWS

MEDICAL ELECTRICITY AND X-RAY. By Sinclair Tousey, M. D., Consulting Surgeon to St. Bartholomew's Clinic, New York: W. B. Saunders Company, Philadelphia.

Dr. Tousey has given us in one good sized volume everything pertaining to electricity and radiotherapy. It is written in a delightfully clear and correct style and its subject matter leaves nothing to be desired.

The illustrations are particularly appropriate in that they assist the text.

The book is worthy of the highest praise.

THE PRACTITIONER'S CASE BOOK. For Recording and Preserving Clinical Histories. Prepared and arranged by the Editorial Staff of the Interstate Medical Journal. Imperial octavo; 286 pages; full cloth binding. Printed on bond writing-paper. With 80 colored anatomical charts (detachable), showing outlines of body and skeleton in light red and the viscera in pale blue. Index for listing patients both by name and case number. St. Louis: Interstate Medical Journal Co. 1910. Price, postpaid, \$2.

The above will be welcomed by the busy practitioner, who is anxious to keep a complete record of his cases, but is usually prevented by lack of time. The history sheets are quite comprehensive, yet labor saving to a degree. The detachable anatomical charts are also excellent.

Such a work cannot be too highly recommended to young practitioners, as its use encourages methodical history taking, thorough routine examinations and systematic observation over the entire course of the case.

A TEXT-BOOK OF PATHOLOGY. Second edition, revised. By Joseph McFarland, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College of Philadelphia. Second edition. Octavo of 856 pages, with 437 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company. 1910. Cloth, \$5, net; half morocco, \$6.50, net.

The author of this work needs no introduction as a medical writer and teacher and in the above named volume he has certainly succeeded in his aim in presenting an excellent text-book for students and reference work for the general practitioner.

This is the second edition and in it he has endeavored to cover practically the entire pathological field; in so doing, he has been obliged to abbreviate some subjects, among which may be mentioned especially, diseases of the bones and joints.

Relative to the publisher's work, the book is liberally illustrated and is well executed, although

the absence of advertising matter and the use of lighter weight paper would be welcomed.

THE CONQUEST OF DISEASE THROUGH ANIMAL EXPERIMENTATION. By James Peter Warbasse, M. D. New York and London: D. Appleton & Co. 1910. Net \$1.

This is an excellent explanation and defense of animal experimentation. It is well written, temperate, not too technical, and holds the interest. It is a very good book to have on one's table where it may catch the eye of patients. It contains convincing arguments if one seeks for a talk or argument, or one may recommend the book unreservedly to one's friends or acquaintances among the laity.

A PRACTICAL TREATISE ON OPHTHALMOLOGY. By L. Webster Fox, M. D., LL.D. D. Appleton & Co. New York and London. 1910.

An inspection of this text-book clearly indicates that the author has the wide information of the student and the practical experience of the active clinician.

It is almost encyclopediac in range, and necessarily the text is written in a clear, concise style which precludes mere reading, but is most excellent for study; while such form possesses many advantages, it also makes inherent certain facts which must be corrected by supplementary reading. The descriptions of operative procedures lack clearness and detail; and some statements, made dogmatically, cannot be accepted without qualification—as for instance that iced pledgets of cotton “should always be used” in cases of ophthalmia neonatorum. However, apart from such exceptions, the teaching of the book is direct, forceful and reliable.

As a basis from which to develop the study of ophthalmology this book of Dr. Fox is unexcelled.

THE DISEASES OF THE SKIN. A Manual for Students and Practitioners. By Alfred Schalek, M. D., Professor of Dermatology, University of Nebraska; formerly Assistant Professor of Dermatology, Rush Medical College, Chicago. New (second) edition, thoroughly revised. 12 mo., 255 pages, with 47 engravings. Cloth, \$1, net. The Medical Epitome Series. Lea & Febiger, Publishers, Philadelphia and New York. 1910.

A volume belonging to the “Medical Epitome Series,” and intended to present brief descriptions of the diseases of the skin, their diagnosis and treatment. It is condensed and practical, but of necessity superficial. Numerous prescriptions add to its usefulness to the practitioner.

The Ohio State Medical Journal

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A BIT OF HISTORY.

Pursuant to the policy of the State Association as defined by the action of the House of Delegates in passing resolutions endorsing the Owen bill now pending in Congress, the Committee on Public Policy and Legislation presented the following resolution to the Platform Committee of the Republican convention recently held in Columbus, and asked its incorporation as a plank in the party platform:

"In the belief that the health of the people of Ohio is a matter of paramount importance, and realizing that the health of this state bears a close relation to that of the nation at large, we hereby reaffirm and renew the pledges of the platform of the Republican party of 1908, favoring the assembling of the various agencies now scattered under various departments into one National Department of Health, as endorsed by the expressed sentiments of President Taft in one of his messages to Congress."

This resolution asked nothing more than the convention of 1908 had pledged and which President Taft had endorsed and there seemed to the committee no possible reason why it should not be accepted, but—it was rejected.

In seeking the cause of such unfavorable

action we have been unable to obtain any satisfaction from the committee beyond vague statements that the resolution referred to a matter pending in Congress at present, and hence had better not be commented upon in the platform. This is a new thought to us! We cannot remember any such exhibition of delicacy heretofore, nor why it should be invoked in this particular instance. Also, the honorable chairman suggested that really being a national question, it had *no place in a state platform*—and this while the air was still ringing with his sonorous utterances in behalf of the tariff, the postal savings bank, the conservation of our national resources, etc., etc.!

In all the reasons given us, no one member of the committee mentioned the fact that according to the newspapers, representatives of interests avowedly antagonistic to the medical profession, a representative of the N. Y. Herald, self-confessedly here in opposition to the introduction of such a resolution, the secretary of the "American League for Medical Freedom" (?) and two other alleged doctors were actively opposing the insertion of such a plank in the platform. Not that they appeared before the committee; theirs was not the kind of work to be done openly; quiet "mission-

ary" work would appear to be more in their line.

We would not assert in the above any wilful slap at the medical profession, but simply record the following facts as a resumé of the situation.

(1) The State Association through its Legislative Committee offered a resolution which had already been incorporated in the platform two years ago—and endorsed by the President.

(2) The daily newspapers chronicle the presence of representatives of wealthy interests avowedly here for the purpose of defeating the introduction of such a measure. These representatives do not appear *openly before the committee*.

(3) The resolution is defeated in committee, without, so far as we can find out, any good and sufficient reason.

The matter is now referred to our members over the state.

THE STATE BOARD LABORATORY.

The laboratory of the State Board of Health inaugurated by our energetic and progressive secretary, Dr. C. O. Probst, under the efficient direction of Mr. Burt R. Rickards is making every effort to assist physicians all over the state by furnishing prompt and accurate laboratory service. That this is being more and more appreciated is evidenced by the increasing number of specimens daily submitted for examination, and yet there is a surprisingly large number of physicians who are unaware of the opportunities offered and advantages to be obtained from the excellent system inaugurated.

Various outfits have been deposited at different distributing points, or may be obtained by correspondence with the central laboratory in the state house. Starting originally with the swabs for diphtheria, antitoxin is now to be obtained at a large number of distributing depots all over the state for free use in charity cases. Next

followed the sputum outfit which provides for the certain recognition of the presence or absence of the tubercle bacillus in suspected sputum.

The Widal outfit has been a great boon to a large number of physicians who have no local private laboratory conveniently at hand, and yet should be used more frequently, especially as typhoid fever is now being so resolutely banished from many of our communities, the question of exact diagnosis is of great importance in order that the true situation may be demonstrated. In this regard the time limitations of the test should be kept in mind, and a negative finding should be discounted if the test is made early in the course of the suspected case.

The examination for suspected rabies have been rather frequently exploited in the newspapers, hence this work of the state laboratory is rather well known. Its value has been demonstrated time and again as invaluable in the prophylaxis of hydrophobia.

To the above has recently been added a malaria outfit for the positive diagnosis of malaria. It consists of two glass slides in a special container with a paper wrapper giving full directions for the technique to be followed in securing the specimen, the time of taking, etc. This is an excellent addition to the scope of the state laboratory, and should be of considerable assistance in banishing that anachronism in these days of greater exactness, a "touch of malaria."

Malaria still occurs in some parts of Ohio, but not as frequently as is even supposed. In some parts of the state it has disappeared as an actual disease and very largely from the terminology of physicians. In others it is still frequently invoked for many indefinite conditions. This new outfit of the state laboratory, it is hoped, will clear up the mists and show the actual conditions prevailing in Ohio, and justify the use of the term malaria in some districts, and

cause us in others to bestir ourselves and seek the real diagnosis.

In other directions also the State Board is planning to extend this work and co-operate with the medical profession for the promotion of the better health of the state.

We are fortunate indeed in the present broadminded board, and especially in our progressive and efficient secretary.

REVISION OF THE JOURNAL MAILING LIST.

Recently the Secretary sent out circular letters to the members of four or five county societies notifying them that their society had sent in no dues and therefore in accordance with the by-laws they were not in good standing and must be dropped from the mailing list of THE JOURNAL. A number of indignant letters were received as a result of the above, but the State Secretary had no choice in the matter. A member may have paid his dues to the local secretary, but until the latter has turned in his report, the state officials are unaware as to the true status of the individual member. The trouble usually has arisen from the habit of many secretaries who wish to wait until the dues of all the members have been collected so that they may be forwarded all at once. This is very well during the first three months of the year, but after that it works an injustice to the member who has paid his dues promptly but whose dues are being held back while the secretary or treasurer is seeking to collect from some real delinquent.

The by-laws distinctly require the report of local societies thirty days before the annual meeting, on penalty of suspension. By courtesy this time has been unofficially extended to the date of the meeting, but after that all who have not been reported as in good standing are perforce suspended. The following month the mailing list is revised and all delinquents are dropped. This is automatic and does not require notification,

but this year the secretary sent the above mentioned circular letter in the belief that the personal notification would bring the matter to the attention of many who deserved to be in good standing, who would take the matter up promptly with the local officials. Results justified this opinion and a goodly per cent of those classed as delinquents through no fault of their own has been restored to good standing.

We would urge that local officials remember that the delaying of sending in the dues may work a decided injustice to their members, especially after the annual meeting. And especially would we urge that the name and dues of every *new* member be sent promptly to the State Treasurer. Every member is entitled to THE JOURNAL as soon as he qualifies; every month that the local official delays in sending in a new members name and dues that member is unjustly deprived of his rights for the same period.

If any member does not receive THE JOURNAL we wish he would drop a card to this office; the cause may be his own, the fault of his local officials, a mistake in this office or at the printers. Wherever it is, we will endeavor to seek it out and correct the trouble.

EDITORIAL NOTES

THE LEGISLATIVE COMMITTEE THANKS
THE HON. ALBERT DOUGLAS OF THE
ELEVENTH CONGRESSIONAL DISTRICT.

Referring again to the offering of a resolution in favor of a Department of Health, the Legislative Committee would like to mention the kindly attitude of one member in particular of the Resolutions Committee. Inasmuch, as mentioned above, the resolution asked for merely a repetition of the health plank of two years ago, which had been specifically endorsed by President Taft, nothing more was done than to present the matter briefly to the committee in session.

It is with all the greater pleasure that the Legislative Committee learns that the *Honorable Albert Douglas* of Chillicothe, of his own volition, purely upon the merits of the case, vigorously

championed the measure and argued strongly for its adoption.

In doing this Mr. Douglas has shown himself a broad-minded student of a national question of political economy, and willing, without even waiting to be asked, to co-operate with our profession in a measure for the welfare of the people at large.

ETERNAL VIGILANCE NECESSARY.

Some of the governors and members of Congress and other representatives of the different commonwealths and congressional districts seem to have lately developed a remarkable indifference as to the wishes and interests of the medical profession.

When a committee representing the New Jersey State Medical Society visited the governor of that State to protest against legislation which they considered to be very detrimental to their interests and that of the commonwealth in general, they were treated, according to report, with great discourtesy. In pleasing contrast with this, however, is the attitude shown by Governor Harmon, of Ohio, in checkmating the well-laid plans of the "optometrists," who seem, however, in New York State, to have carried their point.

It is evident that the privileges incident to the practice of medicine will be very much curtailed unless that profession remains constantly on the alert to protect its interests.—Monthly Cyclopaedia and Med. Bul.

SOME OBSERVATIONS AND IMPRESSIONS OF THE HOUSE OF DELEGATES A. M. A., ST. LOUIS SESSION 1910.

Inasmuch as a full official report of the proceedings is published in the Journal A. M. A., and may be read by all, the writer will relate a few observations and impressions of the deliberative, representative, business body of the American Medical Association.

The house of delegates consists of delegates elected by the state associations, one delegate to five hundred or fraction thereof of their active members, one each from the twelve scientific sections and one from the United States army, the United States navy and the United States P. H. & M. H. Service respectively. At present 146 delegates are entitled to seats in the house of delegates. When 150 is reached another apportionment will be necessary, as this number is the constitutional limit. Ohio is represented by seven delegates having gained one last year and with a little effort on the part of the officers of the state association and of the officers and members of

the county societies, we may gain another this year. Ohio is the fourth state in the Union in point of representation.

The house of delegates convened Monday June 6 at 10:30 a. m. with Colonel Gorgas, retiring president, in the chair. Adjourned for noon and met again in the afternoon. Dr. Gorgas is not only one of the greatest sanitarians in the world, but impresses one with his scholarly attainments, urbanity, and modest dignity. After the installation of the president-elect, Dr. W. H. Welch, on Tuesday, the latter presided over the deliberations of the house. He is as learned, courteous, and dignified as his predecessor and a little better parliamentarian.

The personnel of the house is decidedly representative in character, not only as to sections of our country and constituent associations, sections and departments of public service represented, but also with reference to the classes of physicians from which the delegates were selected. There were present in the body distinguished teachers, authors, editors, men engaged in research work, official heads of governmental departments, representatives of every specialty and a goodly proportion of general practitioners.

The new member is soon impressed that the house of delegates is in fact a deliberate body; while the large amount of business to be transacted demands dispatch for its disposal, special provisions are made and observed for thorough consideration of all important matters. The president at the opening session delivers an address, makes suggestions and appoints eight reference committees. The secretary, treasurer, board of trustees, standing committees, and special committees make reports. These reports have been published and supplied to the delegates for study some days before the house assembles. The president's address and reports above mentioned are received by the house and referred to the appropriate reference committee for careful study, and after a day or more are reported with recommendations back to the house for further consideration. After the opportunity for discussion and amendment, the report as approved or changed by the reference committee—and as sometimes is the case—further modified by the house—is adopted or rejected. Some of the reference committees are kept so busy with matters referred to them that the members thereof have no time left to attend scientific sections, social functions, or even the meetings of the house of delegates except to make and explain their reports.

After observing the house of delegates for the greater portion of four days, being present at every roll call, and remaining until each ad

journalment, seeing it in action, observing its personnel, witnessing the self-sacrificing labor of officers, committeemen and many of the members, the writer is impressed with the high average character and attainments of the delegates, the wise conservatism and the judicious, earnest, constructive work of the house as a whole, along the many lines of activity in promoting worthy objects and the solution of great scientific, economic and philanthropic problems of vast importance to the profession and to the public.

It is regrettable that only three of the seven Ohio delegates were present—Dr. J. A. McCollam, Dr. Robert C. M. Lewis, Dr. E. O. Smith—and Dr. W. H. Snyder received alternate credentials and acted with the delegation. The Ohio delegation was honored in having Dr. J. H. J. Upham on the credentials committee and Dr. J. W. Clemmer chairman of the reference committee on legislation and political action. This was an important committee and Dr. Clemmer's report was creditable to himself and the profession of his state.

Before going to St. Louis the delegates had heard reports and rumors of disaffection in the ranks of the A. M. A. and dissatisfaction with officials and the management of its affairs, and dire threats of "regulation and reform" were circulated by certain persons with real or imaginary grievances or disappointments, by certain medical journals possibly jealous of the state and national journals, and by certain manufacturers and purveyors of patent and proprietary medicines and sophisticated foods, whose sacred right to exploit the profession and the public have been interfered with by the A. M. A. under its able and efficient officers and agencies. At St. Louis if the secular press was to be believed, the A. M. A. was a trust, and insurgency militant; it was a mortal sin for one man to hold more than one office and exert great influence, even in behalf of the medical profession, and it was confidently predicted that Simmons was to be deprived of some of his positions and shorn of his honors and influence. And we were even told that a bomb was to be exploded right in the house of delegates, if a certain militant, not to say belligerent, gentleman from Chicago could secure the documents he desired. So persistent and insistent were the lay reports of these mutterings and predictions, that, coupled with the known desire and request of the secretary editor to be relieved of the burden of the secretaryship, that many delegates were casting about for one with strength enough to wear his armour, and the very active, able and efficient assistant to the secretary, Dr. Frederick R. Green loomed large in the eyes

of the delegates as one worthy to succeed Dr. Simmons as secretary. But from those familiar with accomplished work of the association and the prominent part due to the efficiency and self-sacrificing labors of Dr. Simmons, came the insistent demand that he continue to serve, not himself, but the profession, in this important position.

Whatever difference of opinion may have been entertained as to the position Dr. Simmons holds in the estimation of the profession before attending the St. Louis session there can be but one opinion among those who attended the opening exercises on Tuesday morning and heard the deafening applause from the thousands present, following the tributes paid him by Dr. Moore, of St. Louis, and Dr. Pearce, President of the Missouri State Medical Association, and repeated later, after the testimony of President Welch in his address, to the fidelity and ability with which he has performed his arduous and responsible duties, and then later witnessed the scenes in the house of delegates when he was re-elected.

When Dr. I. C. Chase, of Texas, a state where the opposition to organized medicine, as he said, was greater than in any other one state in the Union, in an earnest speech placed him in nomination, hearty and prolonged applause followed. In rapid succession seconding speeches were made, followed by applause, from the delegations of a dozen states.

Before these were finished Dr. Simmons being loudly called for, arose and stated that while he desired to be relieved of the office, "if you insist that I shall fill the office another year, I will do so." It was finally moved by Dr. Cantrell, of Texas, "That we all nominate Dr. Simmons by a rising vote." Upon the question being put, we looked in vain to see any delegate with the disposition or the courage to remain sitting.

When it is recalled the prominent part the secretary-editor has had in promoting the organization of the profession, the creation of the Council on Pharmacy and Chemistry, with the resulting exposure of fraud and deceit on the part of proprietary manufacturers and the adulterators of foods, and when it is understood that the owners of the vast capital invested in these enterprises affected by having the light turned upon their products and methods could not be expected to tamely submit to the exposure which placed in jeopardy their immense business interests, we need not be surprised at the organized efforts to disrupt and destroy the association and its agencies, and when the source and character of attacks are realized, we may say of those who have been in the thickest of the fight as Bragg

said of Cleveland, "We love him for the enemies he has made."

Of the reports of the four standing committees the Judicial Council, the Committee on Medical Education and Board of Public Instruction on Medical Subjects, those of the Council on Medical Education and the Committee on Medical Legislation were of greatest interest. The Council on Medical Education during the year made a tour of inspection of the colleges of this country and of Canada. Their exhaustive investigations of equipment, faculty, preparatory requirements for admission, and medical curriculum will have the greatest influence in advancing the standards of medical education in this country.

The report of the Committee on Medical Legislation was read by our own Dr. C. A. L. Reed, chairman, and referred to the reference committee headed by our Dr. Clemmer. The report of Dr. Reed's committee embraced an account of what was attempted and what was accomplished in the way of national legislation affecting our profession, and also reviewed legislation enacted or introduced into state legislatures. The report showed great industry and wisdom had been exercised by the committee. This report and the report of the reference committee, which considered it, were received with interest and hearty approval. It is to be regretted that Dr. Reed finds it necessary to retire from this important committee. His experience, ability and self-sacrificing labors on the committee make the vacancy caused by his resignation difficult to fill.

A new committee was formed which includes this committee together with that on organization, defense of medical research, and board of public instruction, on medical subjects, to be known as council on health and public instruction. Among the reports of the several special committees, those of the committee on organization by Dr. J. N. McCormack, the Committee on Ophthalmia Neonatorum by Dr. F. Park Lewis, the Committee on Scientific Research by Dr. Alfred Stengel, the Council on Defense of Medical Research by Dr. Walter B. Cannon and the Committee on Uniform Regulation of Membership merited and received special attention; but the limits of this paper will not permit further notice of many important matters considered and much valuable work performed. If this brief, disjointed sketch of the work of the house of delegates shall incite members of the state association to read the complete reports of the proceedings of the house of delegates, of the general meetings and of the sections, the writer feels that some good will be accomplished and he will be well repaid for its preparation.

As suggested by others who have observed the work of the house of delegates, if the state association will select men for delegates with interest in the broad, general purposes and aspirations of the profession, men qualified to represent the state association, men who spare no pains to attend the session, and then will keep such men as delegates after they have become familiar with the workings of the house as Texas, California, Illinois, Kentucky and a few other states do, it will not be long until Ohio wields an influence in the councils of national organization to which her large number of eminent physicians, members of the state association, entitle her.

My impression is that the profession of this country was never so closely united and that the association was never working so harmoniously and enthusiastically and successfully for the accomplishment of many worthy purposes and the solution of important problems as at the present time.—B. H. Blair, M. D., Lebanon, O., Delegate to the A. M. A.

"OVER STIMULATION DURING SURGICAL PROCEDURES."

For many years it has been the custom, during operative procedures, to use one or another of the so-called heart stimulants at the first sign of pallor or weakening pulse. Surgeons in general have clung to this tradition with a tenacious grip, without regarding facts, and still laboring under the hallucination that these drugs act as cardiac stimulants, raise the blood pressure, and thereby prevent that ever dreaded condition—surgical shock. Whereas, if they would study the action of these various drugs, they would see that often instead of helping the patient, they really harm him.

It is not my intention to enter into the causation and treatment of shock, but rather the treatment of what may be termed the pre-shock stage, a condition characterized by pallor and a greatly increased pulse rate, with a marked diminution of volume. It is in this condition, with the vaso motor center tiring, where the greatest harm is exercised by the employment of these so-called cardiac stimulants.

Strychnine as has been experimentally shown, has very little if any effect on the blood pressure in therapeutic doses; in physiologic doses, after first raising the blood pressure, it greatly reduces it, and produces a condition similar to surgical shock. Digitalis, although it slows the pulse, by causing slower and more forcible contractions of the heart, has no effect upon the blood pressure itself, as more forcible contractions of the heart only increase the rate of flow, but do not

increase the pressure. What is true of these two drugs is also true of the various other cardiac stimulants.

Very often if the patient is left entirely alone, and no drug with the exception of ether administered, the pulse will again regain its normal rate and volume, and the color of the patient from an ashy gray will again return to a more healthy hue. The lowering of the patient's head is a very valuable asset in the treatment of this condition. I have observed time and again a pulse of 110 or more come down to less than a hundred in five minutes, without anything else being done than the lowering of the patient's head.

I have one case in mind in which this phenomenon was demonstrated particularly clearly. It

was a case of ruptured ectopic pregnancy, in which the patient was rapidly sinking. The rupture occurred early in the morning, the operation was performed late in the afternoon. The patient was in marked collapse, and on account of the hemorrhage, cardiac stimulants were out of question. As soon as the patient was placed on the operating table her head was lowered, and in ten minutes, from an almost imperceptible pulse of 160 it came down to 120, and although the volume was still very small, nevertheless the pulse was now readily perceptible. The patient withstood the operation well, and made an uneventful recovery. What is true of the above case is true of thousands of others.—M. E. Blahd, M. D., Cleveland.

STATE BOARD NEWS

At the meeting of the State Medical Board held on July 5, the following motion, which will be of general interest to the profession and especially to those contemplating a course in medicine was unanimously carried:

"Moved, That recognition by the State Medical Board be withdrawn from medical colleges located in Ohio that do not require for matriculation a certificate of admission issued by the entrance examiner of this board, and that all colleges in the state shall file with the secretary of the board a complete list of matriculants on or before November 15 of each year."

The purpose of this ruling is self-evident. Those desiring to pursue medicine should show documentary evidence of proper preliminary education before the medical course is begun. The medical requirements are too exacting for one to divide the time between the professional studies and those which should have been completed before the study of medicine was contemplated and too serious to permit those not sufficiently qualified to attempt it.

STATE BOARD QUESTIONS.

June 13, 14 and 15, 1910.

ANATOMY.

1. Give the origin, course and distribution of the brachial artery.
2. What are the relations of the pneumogastric nerve in the neck?
3. How many bones in a lower extremity? Name them.
4. Name the cerebral lobes and fissures.
5. Give origin, insertion and action of the triceps muscle.

6. Name the parts of the digestive system.
7. Name the muscles of mastication.
8. Give the blood supply of the stomach.
9. What is the cauda equina, foramen of Winslow, optic thalamus, urachus, canal of Nuck?
10. What difference in the structure of voluntary and involuntary muscular tissue?

S. M. S.

OBSTETRICS AND DISEASES OF WOMEN.

1. What changes take place in the blood during pregnancy?
2. What purpose do these changes conserve?
3. Give briefly some of the theories which explain how, following labor, the placenta separates from the uterine wall.
4. Give the data upon which at term a diagnosis of first position of the vertex may be made without making a vaginal examination.
5. Name some of the causes which predispose to hemorrhage after labor.
6. You are called at the outset of labor and find a brow presenting; what do you advise?
7. Differentiate between a tubal pregnancy and an acute salpingitis.
8. Name some of the causes and give the treatment of acute cystitis.
9. How would you treat a hematoma of the scalp in the new born?
10. What have you to say concerning chronic endometritis as a cause of sterility; give its treatment.

E. J. W.

PATHOLOGY.

1. Name the different kinds of necrosis.
2. Describe the pathology of pyosalpinx.
3. Describe the microscopical appearance of a tubercle.
4. Name the different kinds of aneurysm.
5. Define pyemia, septicemia, toxemia and bacteremia.

J. A. D.

DERMATOLOGY, SYPHILOLOGY AND DISEASES OF THE EYE, EAR, NOSE AND THROAT.

1. Describe ichthyosis and its varieties.
2. How does chronic eczema of the palms of the hands appear and how is it treated?
3. Describe lichen planus Wilson, its varieties and mention the treatment.
4. Describe macular syphilids, or syphilitic roseola.
5. When should the treatment of syphilis be commenced and how should it be conducted?
6. Define hypermetropia, how does it occur, and how is it corrected by lenses?
7. Describe catarrhal conjunctivitis. How is it treated?
8. What is atrophic rhinitis? How is it cured?
9. Describe chronic catarrhal inflammation of the middle ear.
10. Describe perichondritis of the laryngeal cartilages.

A. R.

DIAGNOSIS.

1. How are functional or hæmic murmurs discriminated from organic murmurs?
2. Aphasia in its varieties. What central lesions indicate?
3. Determine diagnostic value of laryngeal paralysis.
4. What diagnostic significance is derived from a gross examination of the sputum?
5. What diagnostic significance has coma?

A. R.

PRACTICE OF MEDICINE.

1. How would you diagnose hereditary syphilis in a child?
2. What are the causes and symptoms of multiple neuritis?
3. Name the symptoms or physical signs of locomotor ataxia.
4. What is apoplexy? Give its etiology and state briefly the symptoms.
5. What is the significance of the Wassermann reaction? How is it obtained?
6. Name conditions with which uremia may be confounded.
7. Give the symptoms and physical signs of thoracic aneurysm.
8. How would you treat lobar pneumonia?
9. Give treatment of epidemic and endemic influenza and give sequela.
10. How would you diagnose and treat cholera morbus?

H. H. B., J. A. D., S. M. S., J. M. S.

SURGERY.

1. Give the diagnostic signs of a typical case of pericardial effusion. What is the treatment?
2. Give the treatment of a fractured costal cartilage.
3. Diagnose a case of gall stones. How treat?
4. Differentiate extra uterine pregnancy, ovarian cyst, and peritoneal effusion.
5. Diagnose anterior luxation of the hip joint. How correct?
6. Diagnose calculus of bladder. How treat?
7. Diagnose and give the significance of two kinds of chancre. How treat.
8. How would you treat a case of gonorrheal cystitis?

9. What important structures may be wounded in a vaginal hysterotomy?

10. Differentiate pregnancy and intra-uterine fibroid.

T. A. McC.

CHEMISTRY.

1. How does oxygen give strength to the body?
2. Describe the element that is a part of all acid compounds.
3. What is glycogen, where found, and from what derived?
4. What elements belong to the nitrogen group? Give the properties and uses of the one you consider the most important.
5. What is the amount of CO_2 in the atmosphere and why does it not increase?
6. In what part of the body and in what forms is phosphorous found?
7. Name the most important elements entering into the composition of the human body.
8. Give the principal constituents of milk. How would you detect water adulteration in milk?
9. What is a poison?
10. Name a poison which has a local and a remote effect and give its antidote.

J. M. S.

PHYSIOLOGY.

1. Describe a cell. How are they propagated?
2. What are the elementary tissues and how are their cells classified?
3. What constitutes the cerebro-spinal nervous system?
4. What results are observed when the seventh cranial nerve is paralyzed?
5. What is the relation between blood pressure and the pulse rate?
6. What changes take place in the blood during respiration? Where and how is it accomplished?
7. In a general way, of what does digestion consist?
8. What are enzymes and how do they act?
9. What is the function of the pancreatic juice?
10. What are the solid constituents of the urine and what conditions may change their quantity in health?

H. H. B.

MATERIA MEDICA AND THERAPEUTICS.

1. Explain the action of heat and cold as therapeutic agents and mention indications for each.
2. Under what conditions would you advise arterial transfusion of blood? What advantage has the process over hypodermoclysis? What disadvantage?
3. Given a case of diphtheria in a child five years old. Describe in detail your treatment and the effect expected of the remedy.
4. When should silver nitrate and when should the organic salts of silver be used in the treatment of ophthalmia neonatorum?
5. Give some indications for the use of thyroid gland. What untoward effects are produced by over use?
6. Give some indications for the use of arsenic. In what forms may it be used? Give dose of each and symptoms resulting from its excessive use.
7. Outline a diet for a patient suffering with

diabetes mellitus. Also for one suffering with chronic interstitial nephritis.

8. What would you use to overcome pleurisy with effusion? Explain action.

9. Explain the physiological action of the salines.

10. For what conditions would you advise X-ray treatment? How long should the patient be exposed at a single sitting? When would you advise him to return for treatment if a series of treatments were advised? E. J. W.

MATERIA MEDICA AND THERAPEUTICS (HOMEOPATHIC.)

1. Explain the action of heat and cold as therapeutic agents and mention indications for each.
2. Name the salient symptoms that would lead you to prescribe opium. In what doses would you prescribe it? Is a careful history of the case essential? How many alkaloids has opium? Name five.

3. In prescribing, what is the only true scientific basis for the selection of a drug?

4. Given—swelling and suppuration of glands; exostosis, curvature, caries, pale bloated face, ulceration of skin, swelling of nose and upper lip, scabs on hairy scalp, otorrhœa—cancerous affection. Prescribe.

5. Give some indications for the use of thyroid gland. What untoward effects are produced by over use?

6. Diagnose dysentery and give the three most likely indicated remedies.

7. Given—a woman extremely pale, not emaciated, pulse rapid, 160, almost imperceptible at wrist, slow of comprehension, difficult respiration, coldness of extremities, finger nails blue, excessive hemorrhage from uterus, history of pregnancy negative, single, give the homeopathically indicated remedy. What would you do?

8. How would you treat a case of membranous croup? What germ is present? Name three remedial agencies that will probably be indicated during progress?

9. Differentiate calcarea carb and silicea. Rhus tox and lachesis.

10. For what conditions would you advise X-ray treatment? How long should the patient be exposed at a single sitting? When would you advise him to return for treatment if a series of treatments were advised? T. A. MCC.

L MATERIA MEDICA AND THERAPEUTICS (ECLECTIC). L

1. Explain the action of heat and cold as therapeutic agents and mention indications for each.

2. In what class of agents would you place passiflora? How would you prescribe it? What indications would guide you?

3. What are the properties of gelsemium? What are its indications and in what diseases is it useful?

4. Give dose and indications for use of apocynum. Name some conditions in which you would prescribe it.

5. Give some indications for the use of thyroid

gland. What untoward effects are produced by by over use?

6. Give indications for bryonia and diseases in which it is useful.

7. What uses would you make of carbolic acid in practice? How use it?

8. Chionanthus—in what conditions is this agent useful? What are indications for it?

9. What is the formula of Dover's powder? What are its properties and uses?

10. For what conditions would you advise X-ray treatment? How long should the patient be exposed at a single sitting? When would you advise him to return for treatment if a series of treatments were advised? S. M. S.

CORRESPONDENCE

After learning of the adverse action of the Committee on Resolutions at the late Republican convention the Legislative Committee authorized the secretary to send the following letter to Senator Dick in the hope of obtaining some information. Up until August 3 no word has been received:

Hon. Charles Dick, Chairman of Committee on Resolutions, Akron, Ohio:

Dear Sir—It is with great regret that I learn this morning that your committee rejected the resolution offered by the Ohio State Medical Association commending the assembling of the various National Health Agencies under one head, a resolution which asked nothing more than the platform of 1908 had already pledged and which President Taft has endorsed. This is a subject in which the physicians of Ohio are greatly interested, and as the Secretary of the State Medical Association and Editor of the OHIO STATE MEDICAL JOURNAL I shall be compelled to present the fact of the rejection of this resolution editorially to our 4,000 members over the state.

It is particularly unfortunate that the rejection of this resolution should follow the announcement in the daily papers that various interests, avowedly antagonistic to the medical profession, were on hand to defeat the introduction of such a measure.

I shall be glad to publish any communication you may have to offer in the same issue of our journal in which this matter will be discussed, which will go to press August 1.

Sincerely yours,

J. H. J. UPHAM.

July 27, 1910.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.
LOUIS A. LEVISON, M. D., Toledo.

TREATMENT OF FURUNCLE OF THE
EXTERNAL EAR.

Bush (Merck's Archives, May, 1910, p. 137), outlines the following treatment: The swelling is lanced even before the situation of the furuncle can be determined. This relieves the pain. Sometimes the patient will not submit to lancing, but whether lanced or not the subsequent treatment is the same. Ichthyol 50 per cent. in glycerine is used. A small tampon saturated with the solution is introduced into the canal and some dry cotton inserted over it. No other dressing is applied. The tampon should not exert pressure. The anodyne action of the ichthyol is obtained soon after introduction. The tampon is renewed every day in very painful cases, twice a day. The pus is absorbed by the cotton and the ichthyol prevents reinfection. There is no eczema of the auricle so common after the use of moist dressings. The tampons are used until there is no further discharge or moisture.

POTASSIUM PERMANGANATE IN
SURGERY.

"For four years R. Blumm has treated phlegmons, abscesses, and furuncles in the following manner: After incision and evacuation of pus, the entire cavity is filled with crystallized potassium permanganate, upon which undiluted pyrolytic acid is then poured. The wound is then covered with compresses and saturated with a 6 per cent. solution of the acid. After twenty-four hours the entire cavity will be filled with a brownish sediment, which is best washed out with running water. The exposed portions are perfectly clean and the wound will close up rapidly. The action of the acid upon the crystals causes an evolution of oxygen."—Muench. Med. Woch., Feb. 8, 1910; via. Merck's Archives.

TREATMENT OF RINGWORM.

"In dealing with numerous cases of pediculosis in fever wards, E. Lynn Jenkins reports that he and his associates always employ the essential oil of sassafras, which, without exception, they find acts as a specific in such cases.

"When both pediculosis and ringworm occurred in the same scalp, it was noticed that the latter disease also reacted favorably to this preparation.

"This led them to test the oil in ordinary cases

of ringworm, and so far the results have been most happy. The hair is cut closely around in order to identify the patches, the application of the oil being made twice a day by means of a camel-hair brush. This is continued for a few weeks, as the case indicates. No irritation is produced, while the preparation is most pleasant to use. Not only is the spread of the infection prevented, but that the fungus is being destroyed with certainty is recognized in two or three weeks, by commencing development of fine hairs."—British Med. Jour., Jan. 29, 1910; via. Merck's Archives.

TYPHOID SPINE TREATED BY APPLYING
A PLASTER JACKET.

Goddu (Bost. Med. & Surg. Jour., May 26, 1910, p. 711,) reports the following case:

"It was absolutely impossible to make a complete examination on account of patient's inability to move because of pain.

"Patient was placed face downward on hammock and hammock drawn as tightly as possible; given no hyperextension as this movement seemed to cause very severe pain. A plaster of paris jacket was then put on as quickly as possible. The next day patient felt much better and no morphia whatever was given. The temperature dropped to almost normal, with a lower pulse.

"Patient kept this jacket on two weeks, when another was put on with a fair amount of hyperextensions. He was now able easily to turn in bed. In two days patient was able to sit up in a chair, without any pain at all, for two hours. Two weeks later he sat up all day and had no pain whatever."

He now began to walk with crutches. Eight weeks after first jacket was applied the patient was discharged in excellent condition, absolutely free from any pain, and still wearing a plaster of Paris jacket. Five weeks later he was rapidly gaining weight and a leather jacket was fitted. Meanwhile the patient had been going about the city without any discomfort.

ADENOIDS AND ASTHENOPIA.

Dr. W. M. Killen (Brit. Med. Journal, September 25, 1909), says: "In a large number of school children who suffered with blurring vision and fatigue on reading, he found naso-pharyngeal

hypertrophy to be the real cause of the symptoms. Removal of the adenoids and correction of faulty nasal passages resulted in cure in cases where ordinarily glasses would be thought necessary."—via Post Graduate.

DISEASED TONSILS SHOULD BE ENUCLEATED.

The fact that there are still physicians who do not realize the harm that may arise from diseased tonsils leads us to quote the final paragraph of Layman's article on "Degenerate Tonsils."

"I do not understand why some still insist that it is good practice to wait for the so-called atrophy of the tonsils, when it is well established that a diseased tonsil is a menace to the general health. The fact that complete extirpation of degenerate tonsils has in a number of cases improved, arrested and cured cases of glandular enlargement, rheumatism, persistent cough, middle-ear deafness and many systemic disturbances, makes it imperative that physicians advise thorough enucleation of the diseased tonsil, not only as a cure for existing conditions, but as a measure of prophylaxis."—Ind. State Med. Jour., April, 1910.

END-TO-END INTESTINAL ANASTOMOSIS BY THE INVAGINATION METHOD.

Gibson (Surg. Gynec. & Obs., June, 1910, p. 649) says that he has found the method particularly suited to anastomosis of the lower end of the colon. The upper cut edge of the gut is grasped by two Kocher clamps and introduced into the lower end and held there. The gut is rotated about a fourth way round so that the nonperitoneal surfaces do not lie entirely adjacent. Eight to ten Lembert sutures are now introduced. Beginning on the lower segment the needle issues just short of the cut edge and is introduced on the upper segment just above where the cut edge of the lower segment lies against the intact wall of the upper segment. When tied this suture invaginates the free edge of the lower segment, thus approximating the peritoneal surfaces of the upper and lower segments of the gut. The Kocher clamps are now removed and a continuous running suture applied to further invaginate the first line of sutures. This completes the anastomosis.

WATER-CURTAIN AN EFFICIENT MEANS FOR COOLING SICK ROOMS.

Manning (J. A. M. A., June 4, 1910) "suggests the use of a water curtain for cooling purposes and avoidance of dust in work rooms, factories,

tenements, etc. It may also be available in residences in tropical countries. As advised by him it consists of a curtain with a perforated tin tube thrust through its upper hem, like an ordinary curtain stick, and connected by a rubber tube with a water faucet. At the bottom of the curtain is suspended a tin trough on a slight slant to carry off the water dripping from the curtain. He also adds an electric fan placed at one end of the curtain to hasten the evaporation. Formalin or similar agents may be used with the same apparatus when germicidal effects are required. Tests made in the emergency room in the government printing office in Washington showed a reduction of seven to eleven degrees F. during the hot weather of last summer. This, when a temperature of 96 to 98 degrees in the shade exists outside, is a very much to be appreciated reduction. The apparatus is inexpensive and very adaptable to any quarters. The curtain can be removed for washing and its clean duplicate put in place in a few minutes. The method is illustrated."—via Med. Record.

EFFECTS OF BATHS ON MENSTRUATION.

There are yet many women who fear to bathe at all during their menstrual period, and possibly there are some physicians who thoughtlessly allow this mistaken notion to go unquestioned. It is not a bath but the kind of a bath that is important.

"A cold bath or sea-bathing will sometimes cause the suppression of the menses, but this does not apply to the ordinary warm bath which so many women quite erroneously consider should not be taken during the progress of a menstrual period. There is not the slightest justification for depriving oneself of this source of comfort and cleanliness. It can do no possible harm."—Nursing Times.

PROLONGED DILATATION FOR DYSMENORRHEA.

Somers (Calif. State Jour. Med., July, 1910, p. 241) after briefly mentioning extra-uterine causes of monthly pain (i. e. inflammatory involvement of the tube, ovary, peritoneum or cellular tissues) and stating that the method is not intended for cases of pain caused by fibroids, polyps, endometritis, or metritis, says:

"By far the greatest number of cases of dysmenorrhea are due either to maldevelopment or malposition of the uterus, and the point I wish to make concerns these alone.

"Whether the condition be maldevelopment or malposition, the indications for treatment are the

same—viz., thorough dilatation. By this we expect to attain (1) permanent widening of the canal; (2) thorough stretching of the muscular tissue or the uterus, which in turn (3) overcomes muscular spasm and (4) loosens up the tissues so that they may swell more easily at menstruation.

"The best instruments for attaining full dilatation are the Kelly dilators, consisting of a set of eight short graduated sounds. The process of dilatation should take from three-quarters of an hour to an hour, with the patient fully anesthetized. Not only should the dilatation be slowly and carefully done, but the most important point is, that after size 17 or 18 has been reached, the instrument should be left in place. The patient is put to bed with the dilator still within the uterus. When the patient recovers from the anesthetic, if much pain is complained of, a hypodermic of morphin in given. At the end of eight or ten hours the instrument is removed, by inserting a finger in the vagina against the cervix and then withdrawing the sound.

"The result of this prolonged stretching is the attainment of the desired end. The first two or three periods following, are generally accompanied by a very free flow, but without pain. Gradually the flow becomes normal in amount and character."

THE VALUE OF A LEUCOCYTE COUNT.

Rhamy (Jour. Ind. State Med. Soc., June, 1910, p. 249) from a review of 300 miscellaneous counts draws the following conclusions:

"A differential count is of much more value than a total count.

"The differential and total count taken together may and most often do give much valuable diagnostic and prognostic aid.

"The differential count gives an index of the amount of toxic absorption.

"A high neutrophile count, with a high total count, indicates either an acute systemic infection, a gangrenous process or suppuration.

"A neutrophile count above 80 per cent usually means suppuration.

"A low polynuclear or total count, in the presence of a severe process, denotes low resistance, proportionate to the decrease.

"An increase of large lymphocytes, accompanied by an eosinophilia, is presumptive evidence of syphilis in a suspected case.

"An increase of large lymphocytes and transitional cells, with a diminution of neutrophiles, small lymphocytes and eosinophiles, in the pres-

ence of a continued fever, is strong evidence in favor of typhoid.

"Leucocytic crises may occur in typhoid.

"Typhoid usually has a leucopenia during the first week; after the first week leucocytosis is common.

"A small lymphocytosis may be part of the early pathological changes in Graves' disease.

"The role of the transitional cells seems to favor the theory that the large mononuclear cell is the common origin of all forms of leucocytes."

DRUGS WHICH COLOR THE URINE.

In making urinary tests certain confusing reactions may occur as the following clipping shows:

"Bromoform gives a greenish color, which, however, is not characteristic, as it occurs with other drugs.

"Cascara sagrada, etc.—A yellow or reddish-yellow color results if considerable doses of drugs of this group have been taken. On boiling and on the addition of nitric acid this color becomes dark yellow to brownish. On the addition of an alkali a red color results, which persists on boiling. The addition of baryta water or the milk of lime causes a colorless precipitate to be thrown down, the urine meanwhile retaining its color.

"Phenocoll and its salts turn the urine a reddish-brown color, sometimes even dark brown. On adding ferric chloride the discoloration becomes more pronounced, but it disappears again on adding sulphuric acid.

"Phenol—The urine turns dark green and then black as a result of the formation of hydroquinine. Salol gives a similar discoloration, but urine containing it turns dark red on the addition of ferric chloride, showing the presence of salicylic acid.

"Santonin gives a dark red color owing to the production of hematoporphyrin. The coloring matter can be precipitated in an alkaline solution of barium chloride, and is dissolved in alcohol containing a small amount of hydrochloric acid.—Med. Summary.

PERITONEAL PAIN ON PRESSURE AND ON ABRUPT RELEASE OF PRESSURE.

This sign has proved of considerable value and will bear further mention though mentioned in these columns when it was first published.

"Blumberg (Berl. klin. Woch., XLVII No. 4) first described this sign of peritonitis in 1908. It is instructive in appendicitis, revealing an inflammatory reaction on the part of the peritoneum possibly before any other signs of the disease be-

come manifest. The patient is asked if he feels pain when the hand is pressed down over the appendix; this is pain A. Then the hand is suddenly and completely lifted from contact with the abdominal wall, and the patient is asked if he feels pain as this is done; this is pain B. Each pain represents different conditions; the pressure pain reveals the lesion below. As the hand pressing down is suddenly raised, the elastic abdominal wall springs back into place, and this pulls and draws on the peritoneum, causing pain if the peritoneum is inflamed but not in normal conditions."—Post Graduate.

THE PRESENT STATUS OF THE TREATMENT OF GRAVES DISEASE.

Mumford reviews briefly (Bost. Med. & Surg. Jour., June 2, 1910, p. 736) the recent literature of Graves' disease (hyperthyroidism) and comes to the following conclusions as to the treatment:

"Advanced Graves' disease may exist without the presence of all the classical symptoms.

"Graves' disease can nearly always be cured if taken early.

"The sera of Rogers and Beebe cure a goodly percentage of cases.

"Through hydrobromate of quinine (neutral), as used by Forchheimer and by Jackson, we find a great percentage of improvements and of cures. It is a pity so few cases have been reported.

"The great and increasing experience of qualified operators is showing that more than 70 per cent of Graves' disease patients are now being cured by partial thyroidectomy, and the percentage of such cures is rising.

"Treat the cases early by rest, by sera and by hydrobromate of quinine; if no improvement results in two months, operate by thyroidectomy, and always regard the operation as the surest cure."

(Forchheimer's treatment consists of the administration of 5 gr. neutral hydrobromate of quinine t. i. d.)

EXAMINATION OF CHILDREN THROUGH THE RECTUM.

Pisek (Vermont Med. Monthly, May, 1910, p. 119) calls attention to a procedure which is often overlooked when making an examination of abdominal conditions in children.

"The well greased index finger in the case of the child, or the little finger in the infant, can be used for rectal exploration of the abdomen and with the help of the other hand, bimanual examination is easily made. The abdominal wall is usually thin and offers little or no resistance to the palpating finger. As a rule no anesthetic

is required, as the sphincter relaxes easily, the discomfort is temporary. The child should lie on its back with hips elevated, and the thighs flexed on the abdomen. The examiner standing on the right side of the patient explores with the well lubricated finger of the right hand, and uses the left hand for abdominal palpation. The operation is reversed for the left side of the body. Any abnormalities, new growths, or diseased conditions of the structures and viscera in the lower abdomen can then be palpated.

"In cases of tuberculous peritonitis the abnormal omental thickening and the matting of the intestines, can often well be made out, the diagnosis confirmed, and the prognosis made more definite. Enlarged mesenteric and retro-peritoneal glands are easily palpable by a sweeping motion of the introduced finger without the necessity of changing hands.

"Intra-abdominal sarcomata can be quite definitely located; calculi in the bladder or ureters palpated, malformations of the kidneys or enlarged kidneys, as in hydro- or pyo-nephrosis may be distinguished.

"Thus it is made evident that in an abdominal case where the diagnosis is not absolutely clear and uncomplicated, we cannot afford to pass judgment upon a given case without recourse to a thorough examination through the rectum."

MEDICINE

L. A. Levison, M. D.

PURPURA CAUSED BY THE INGESTION OF THE IODIDS.

The production of skin lesions by the administration of the iodids is of such common occurrence that Knowles' paper (Knowles, Journal American Medical Association July 9, 1910) is of great interest. There are but few lesions of the skin which have not been caused by small or large doses of iodine or its various salts. Knowles pays particular attention to the purpuric type of lesion. He divides these purpuric eruptions into two groups: the first includes the extensive petechial and hemorrhage, bullous cases, which occur in those individuals with organic disease, particularly of the kidneys or the heart, or with a lowered condition of the general economy, making them more susceptible to the effect of the drug, or with a strong idiosyncrasy to the same. The second group includes all cases with a localized distribution, particularly those in which the eruption is limited to the lower extremities, which occur in those individuals in perfect health. Sex and age have nothing to do with the occurrence of the eruption, although most of the cases developed during middle life, and a con-

siderably larger percentage of males were attacked than females. The drug was administered in twenty-two of the sixty-one cases for syphilis, for rheumatism in nine cases, and in the remainder in numerous other conditions, none of which apparently exerted any predisposing influence. The quantity of the drug given and the length of administration varied so markedly that an average dose or the length of time of continuance cannot be stated, the personal element alone deciding the question of an eruption.

THE TREATMENT OF HEMORRHAGE FROM GASTRIC ULCER.

Kaufmann (American Journal of Medical Sciences June 1910) considers gastric lavage a method of the greatest importance in the control of gastric hemorrhage. He saw this method used first in Kussmaul's clinic more than twenty-five years ago and since that time he has used it in a series of cases with favorable results. When carefully performed, the danger of causing perforation by overdistention from lavage is out of the question. On the contrary, lavage exerts its greatest benefit by doing away with the real cause of overdistention, by removing the large quantities of accumulated blood, acid secretions, food remnants, and gas, which are usually present in such cases, often producing an enormous distention of the stomach. A further objection to lavage is that it disturbs the complete rest of the stomach, which is essential in order to firmly secure the freshly formed thrombus. This is correct when the hemorrhage has ceased and when an efficient thrombus has formed. However, conditions are different when the bleeding continues, because then either no thrombus has developed, or if formed, does not completely fill the opening of the vessel. Kaufmann states that the passage of the tube is not difficult and does not excite the patient. Lavage should always be tried before an operation is decided upon.

THE TREATMENT OF CHOREA WITH LARGE DOSES OF ARSENIC.

Hassin and Herschfeld (Medical Record July 2, 1910) have successfully treated four cases of chorea by the method of Comby-Filatov. They have used arsenious acid in 1.1000 solution and in smaller doses than advocated by Comby, believing it to be safer than Fowler's solution. There were no serious complications in their cases except vomiting in one case and oedema of the lids and herpes in another. One of their cases, a boy of eight years, could safely bear five tea-spoonsfuls of the 1.1000 solution of arsenious

acid; i. e., gr. 1/3, whereas he could not tolerate nine drops of Fowler's solution. The usual effects of arsenical treatment can be greatly mitigated by using arsenious acid in place of Fowler's solution.

THE TREATMENT OF FURUNCULOSIS.

Bowen (Journal American Medical Association July 16, 1910) calls attention to a method of treating the skin of those afflicted with furunculosis that has proved universally effective in a large number of cases during the last fifteen years. The patient is directed to wash the whole body with warm water and soap in the morning and at night. This part of the treatment is regarded as most essential, although when the furuncles have been confined to the neck it may be sufficient to wash only the upper part of the body, but it is not so thorough a procedure. The skin is then dried and bathed in an antiseptic solution such as boracic acid in water. Other solutions such as bichloride may be used but Bowen prefers the boracic acid. The skin is allowed to dry without wiping, and the individual furuncles are treated with the following ointment:

Boracic Acid—One dram.

Precipitated Sulphur—One dram.

Carbolized Petrolatum—One ounce.

All clothing that comes in contact with the skin should be changed daily as the infection is undoubtedly retained in the collars and underclothing. Early opening of the individual lesions is not advised. The general and hygienic treatment which is indicated in the particular case should be carried out as before. This method when carried out carefully has rarely disappointed the writer even when other means such as the vaccine treatment have failed.

CHRONIC FAMILY JAUNDICE.

(Tileston and Griffin, American Journal of Medical Sciences June, 1910.)

This condition has attracted so little attention in this country that no articles concerning it have appeared in this country. The disease shows the following important features: Jaundice persisting from birth or early childhood appearing in several members of a family, frequently running through two, three, or even more generations. The jaundice is usually not intense without any of the signs of bileduct obstruction or of cholemia, such as itching, slow pulse, xanthomas and hemorrhages. The stools are not discolored, the urine contains urobilin, but no bile. The spleen is constantly enlarged, but not the liver. A moderate grade of anemia is usually present.

"Bilious attacks" followed dietary indiscretions or constipation are common.

There are a few other familial affections which may occur in several members of a family, and show more or less resemblance to chronic family jaundice.

Congenital obliteration of the bileducts leads to intense obstructive jaundice, visible at birth. It is incompatible with long continuance of life. The diagnosis can be made from the fact that the gallbladder is greatly dilated, and from the time of the appearance of the jaundice.

Fatal icterus neonatorum without obstruction of the bileducts is met with very rarely in certain families. In this condition, all the children of the family become deeply jaundiced a few

days after birth and usually die a few days or weeks after birth. Bile is found in the urine and the stools are well colored.

Juvenile family cirrhosis has been described a number of times. The disease resembles in its course Hanot's cirrhosis and is usually fatal before the twentieth year.

Familial splenomegaly of the Gaucher type may have to be differentiated. This condition is characterized by enormous enlargement of the spleen, lasting over many years, usually occurring in several members of a family and affecting females almost exclusively. The liver is almost constantly enlarged, anemia is present, the skin is pigmented, but jaundice is seldom, and ascites never met with.

AMERICAN PROCTOLOGIC SOCIETY

Twelfth annual meeting held at St. Louis, Mo., June 6 and 7, 1910. The President, Dr. Dwight H. Murray, of Syracuse, N. Y., in the chair.

Officers elected for the ensuing year: President, George J. Cook, M. D., Indianapolis, Indiana; Vice-President, Jerome M. Lynch, M. D., New York City, N. Y.; Secretary-Treasurer, Lewis H. Adler, Jr., M. D., Philadelphia, Pa.

The following were elected honorary fellows: Mr. F. Swinford Edwards, Mr. W. W. Wallis, and Mr. P. Lockhart Mummery, and Mr. W. Ernest Miles, all of London, England.

The following were elected active fellows of the society: Dr. Horace Samuel Heath, 320 Temple Court Building, Denver, Colo.; Dr. Stanley G. Zinke, 222 Fifth avenue, Leavenworth, Kansas; Dr. Granville S. Hanes, Masonic Temple, Louisville, Ky.

The following is an abstract of the principal papers read:

PRESIDENT'S ADDRESS, "UNDERGRADUATE PROCTOLOGY."

By Dwight H. Murray, M. D., of Syracuse, N. Y.

After thanking the society for the honor conferred upon him in making him President, he made some recommendations as to its future before taking up the formal subject of his address.

He considered that the American Proctologic Society stood for a high class of scientific work and the best that there is in proctology. He believed that it would be for the best interests of the society that the program of future meetings should be made up of a symposium, or possibly two, with essays that shall treat thoroughly some selected subject or subjects, and that these papers should be written by men whose part in the symposium should be assigned to them by the executive committee. He suggested that the program

should not be too crowded and that sufficient time should be given for a full discussion of every paper and subject presented.

He believed that a volume or year-book of the American Proctologic Society containing a symposium with additional papers of merit such as would be presented by experts in proctology, could be made of great value to the profession and would be sought after by general practitioners. He believed that it was of the utmost importance to the society that the transactions be published yearly as it would be a decided step backward to omit the publication no matter what its cost might be.

A recommendation was also made regarding the limitations of the field of the proctologist. He believed it to be true that the ethical practice of proctology was too narrow a field in which the specialist could gain a competence. He, therefore, recommended that this society take up the question of the limit of proctology as a specialty and that it be changed to include diseases of the small intestines, in other words, that proctologists become procto-enterologists; in this way every member of the specialty would be doing uniform work.

He then proceeded to take up the main subject of his address "Undergraduate Proctology." He believed that the specialty was rapidly assuming the importance which is its due, in spite of the opposition it has experienced from the general surgeons who have seemed to look upon it as an unwelcome invasion of their field.

He considered that one of the most important duties of the Proctologic Society was an educational one. He hoped that with the increasing appreciation and demand for this kind of special work, that the colleges would take up the subject in a manner which its importance demands, and that if the medical colleges did not educate the profession in this branch of medicine, the members of the Proctologic Society must do it. He put forth the claim that the field of medicine and surgery is too large to admit of any man becoming an expert in all branches. This is an

age of specialties and the very limitations of a specialist make an expert of him.

He believed that proctologic teaching in colleges should be done by men learned in the specialty and not by general surgeons who only teach in a desolatory manner, so that when the students are graduated they go forth to the practice of their profession in fully 75 per cent of the cases with little or no knowledge of this line of work.

He then proceeded to prove this point by a statistical report showing the answers to questions which he propounded in a communication to fifty of the most prominent colleges in the United States and Canada. The answers to those questions show conclusively that a very large percentage of the college faculties believe that proctology is of minor importance and that it is not necessary to give the student any special training in the subject.

In order to prove his point he found it necessary to communicate with a large number of physicians, including specialists in various branches and men who had graduated during the years from 1873 to 1905. He sent communications to these men asking them to answer certain questions which would show whether they believed they would have been better prepared for their practice and have been better able to treat their patients, if they had been given instructions in this line of work. Ninety per cent of the physicians answered the questions in the affirmative, which he believed told the story from the standpoint of the physician. This gave him good comparison from the standpoint of the college faculty on one hand who feel that they know the subjects in which the student should be trained at the beginning of his life work, and from the standpoint of the physician on the other hand who is in the midst of his life work. These answers show that physicians believe that colleges should devote less time to major things in specialties and surgery, and instead give their students more definite and practical instruction in proctology.

Dr. Murray then presented the questions and answers from the college faculties and physicians in tabulated form. He did not claim that the work of the eye, ear, nose and throat or of any of the specialties was unimportant, but he did maintain that the time given to these specialties should be shared in a proper way with proctology, which would not detract from the importance of the older specialty but would put the young graduate in possession of knowledge that would not only be of great value to him, but of far greater value to his patients. There are certain common and important diseases in every specialty that the young physician is sure to meet and ought to be able to recognize.

He believed it to be the duty of the American Proctologic Society to foster a sentiment in the profession and among college authorities favorable to the special teaching of proctology either separately or as a branch of general surgery. He did not deem it necessary that a special chair of proctology should be created, but that a course in proctology should be provided for under the chair of general surgery.

Dr. Murray believed that it would be wise for

the American Proctologic Society to offer a prize of a substantial sum of money for the best original graduating thesis on a proctologic subject. The competition to be open to graduating classes of any college in the United States and Canada.

In conclusion the doctor believed that the profession should offer more encouragement to specialties in all branches, especially to those who are willing to devote their time to a branch which has for some reason been neglected, as proctology has been. Then it would be practically impossible for quacks and healers of various sects and isms to take advantage of our professional neglect and use it as their opportunity to play upon the credulity and gullibility of human nature.

"REVIEW OF PROCTOLOGIC LITERATURE FROM MARCH, 1909, TO MARCH, 1910."

By Samuel T. Earle, M. D., of Baltimore, Md.

The committee on proctologic literature reviewed the following papers as worthy of the attention of the members of the Proctologic Society.

"The Treatment of Hemorrhoids by Zinc-mercury Ionization," by Dr. T. J. Bokeham, which appeared in the proceedings of the Royal Society of Medicine, May, 1909, p. 135.

A paper by Dr. Herman A. Brav in the Monthly Cyclopedia and Bulletin, May, 1909, p. 268. "The Importance of Careful Post-operative Treatment in Rectal Operations."

A paper from the Albany Medical Annals, May, 1909, Vol. XXX, by Dr. George Blumer, New Haven, Conn. "A Neglected Rectal Sign of Value in the Diagnosis and Prognosis of Obscure Malignant and Inflammatory Diseases Within the Abdomen." The sign is spoken of as the rectal shelf, which is observed on making a digital examination of the rectum on the anterior rectal wall, from two to four centimeters above the prostrate gland in males. This shelf is of almost cartilaginous feel which projects into the rectal cavity. In some cases the circumference of the rectum is involved in an annular zone of infiltration, more marked anteriorly and tapering off toward the posterior wall, a signet ring stricture, as Schnitzler calls it. The summary of his paper is contained in the following:

1. In certain forms of carcinoma of the abdominal organs, notably gastric carcinoma, and in some cases of tubercular peritonitis, implantation metastases in Douglas' pouch are common.

2. These metastases impinge upon the rectum and may infiltrate its submucosa, causing a peculiar shelflike tumor on the anterior rectal wall, readily felt by the examining finger.

3. In cases of gastric carcinoma this may be an early metastasis, and occurs especially in males.

4. In such cases the primary tumor may be latent and the metastasis may be large enough to cause symptoms of obstruction. It has been mistaken at times for rectal carcinoma and has been removed as such.

5. The not infrequent occurrence of this rectal shelf makes it a diagnostic and prognostic sign of a good deal of importance, and warrants th

statement that in no case of obscure abdominal disease should be a rectal examination be omitted.

Dr. W. I. DeC. Wheeler, in the *London Lancet*, March 6, 1909, gives excellent reasons for always using the abdominal route, or a combined method for excision of carcinoma of the rectum, whenever the malignant growth is three inches or more above the sphincter.

"The Technic of Excision of the Rectum in Proctidentia," as given by Dr. John H. Cunningham, Jr., Boston, Mass., *Annals of Surgery*, May, 1909, is referred to and favorably commented upon.

Dr. A. L. Wolbarst's improved rectal irrigating tube is referred to. A description of the instrument may be found in the *Journal of the American Medical Association*, July 31, 1909.

"MALFORMATIONS OF THE ANUS AND RECTUM; REPORT OF FOUR CASES."

By Alois B. Graham, A. M., M. D., of Indianapolis, Ind.

Congenital malformations demand prompt surgical treatment. Many cases are never reported and the percentage is evidently much larger than statistics indicate. These malformations are sufficiently uncommon and interesting to warrant placing every case on record. Report of four cases.

Case 1.—White male child, born with no trace of an anus, and in whom careful dissection and exploration failed to find any trace of a rectum. Colostomy was suggested, but the parents refused their consent. Child died four days later. Autopsy refused.

Case 2.—Colored male child, age five years, born with a complete obstruction of the anus by a membranous diaphragm, which was perforated by the attending physician. Examination revealed a dense stricture, almost impermeable, involving the entire anal canal. The interesting point was the presence of a hypospadias through which feces had escaped for two years. The communication between the rectum and urethra was the result of ulcerations above the stricture rather than defective embryological development. Surgical treatment was refused.

Case 3.—Colored female child, age fifty-six days, in whom examination revealed a well-formed anus and a protruding or bulging imperforate rectum. A photograph shows a pronounced distention of the abdomen, the result of a fifty-six days' intestinal obstruction. Posteriorly, the rectum had no attachments, and the finger could be introduced easily behind the bulging imperforate gut, through the anal canal, into a blind pouch. A fistulous opening was found in the vagina just behind the hymen. The meconium and a small quantity of feces had escaped through this opening. The protruding rectal mucosa was dissected from its attachments and excised. The rectal mucosa was then sutured to the free skin at the anal margin, except for one-eighth of an inch posteriorly. This was used for drainage in case the blind pouch became infected. This patient made a good recovery. At the last examination which was three months fol-

lowing operation, the finger could be introduced easily into the rectum, the stools were normal, and sphincteric control was good. The fistulous opening into the vagina was closed, and the posterior rectal mucosa was firmly united to the skin at the anal margin. With the exception of an abdomen, which seemed to be a trifle prominent for one of its age, the child appeared normal.

Case 4.—White child, one of twins, age forty-two hours, in whom examination revealed an imperforate urethra and no trace of a anus. Penis and scrotum were well developed, but neither testicle could be palpated. Careful dissection and exploration failed to find any trace of a rectum. A two-inch incision was made in the median line just above the pubis, but no bladder could be found. Decided to perform a colostomy or sigmoidostomy. A portion of what was supposed to be the sigmoid was opened and a large quantity of meconium escaped. Exploration revealed a pouch which appeared of much larger dimensions than a normal colon or sigmoid should be. Operation was completed, and yet our inability to find the bladder made the case a hopeless one. Child died twenty-four hours later. At autopsy no bladder was found. The entire large intestine was removed. This case is of interest from the point of view of defective development. The pouchlike termination of the intestine might well be termed a monstrosity. The writer is inclined to believe that it is one of those rare cases in which the colon or sigmoid opens into the uterus. While the local examination revealed a male child, with the exception of being able to palpate the testicles, the examination of the specimen removed at autopsy reveals marked evidence of the female generative organs. This child was a transverse hermaphrodite—namely, one in whom the external genitals seem to be of one sex and the internal of the other. Report of examination of specimen states that the pouchlike termination of the intestine is formed of three organs: namely, the bladder, uterus and rectum. (Specimen shown.)

"THE USE OF QUININE AND UREA HYDROCHLORIDE AS A LOCAL ANAESTHETIC IN ANO-RECTAL SURGERY."

By Louis J. Hirschman, M. D., of Detroit, Mich.

Dr. Hirschman presented to the society a report of his work with quinine and urea hydrochloride as a local anesthetic in ano-rectal surgery. The cases operated upon were as follows:

Acute thrombotic hemorrhoids 10; internal hemorrhoids 22; interno-external hemorrhoids 7; external hemorrhoids 10; fistula-in-ano 14; abscess peri-anal 7; fissure-in-ano 7; excision of scar tissue 3; Ball's operation (pruritus ani) 2; Hypertrophied papillae 16; inflamed morganiian crypts 4. Total, 102.

He reported perfect results as far as operative anesthesia was concerned in every case, and in but seven cases was there any post-operative pain. He uses the 1 per cent solution of quinine and urea hydrochloride in all of his cases of ano-rectal surgery, where suturing of the skin is not required.

The technic of administration as employed by Hirschman is the same as that used with weak solutions of cocain and eucain. He describes this technic in detail. He believes that the substitution of quinine and urea hydrochloride for any of the other anesthetic salts hitherto employed will be found eminently satisfactory in all cases of ano-rectal surgery, where suturing of the integument is not required. He sums up its advantages over the other anesthetic drugs as follows:

First.—It is soluble in water.

Second.—It can be sterilized.

Third.—It is equal to cocain in anesthetic power.

Fourth.—It is absolutely non-toxic.

Fifth.—It has a pronounced hemostatic action.

Sixth.—Post-operative anesthesia lasts from four hours to several days.

Seventh.—It is inexpensive and most always available.

"ATONY OF THE RECTUM."

By William M. Beach, M. D., of Pittsburg, Pa.

Dr. Beach stated that atony or sluggishness of the rectum signifies the inability to expel its contents by reason of impaired musculature, ligation or innervation, and further that the musculature in the rectum proper, or that portion above the plane of the levator ani is entirely involuntary whose inertia must therefore be due to some inherent factor.

On the contrary, the anal canal, which is made up for the most part of the voluntary fiber has most to do with the expulsive act, the normal function of which depends chiefly upon the muscular automaton that is intact, proper innervation and psychic influence.

The physiologic rectum depends upon (1) an unobstructed canal, (2) firm ligaments, and (3) a well-developed rectal sense residing in the anal canal. Factors contributing to atony are (a) traumatism to the perineal body, (b) disease in the anal canal, (c) enteroptosis secondary to general systemic conditions or local anatomic anomalies, (d) the abuse of injections and drastic catharsis, (e) disease in adjacent organs, as prolaposed uterus, adhesions, neoplasms, appendicitis, prostatitis, circulatory disturbance as engorged portal vessels and primary gastric diseases, (f) atony may be the sequel to luesis or senility. The treatment is that of constipation being guided by the cause. Alterative, dietetic and mechanical agencies are to be invoked.

"VILLOUS TUMOR OF THE RECTUM."

By T. Chittenden Hill, M. D., of Boston, Mass.

The author stated that a villous tumor of the rectum is very uncommon and but few cases have been recorded in current literature. B. Merril Ricketts reported a case before this society in 1907 and states that but "Sixty-two cases have been reported, nine of which have been by six American authors." Since then I have been able to find but one case reported by Vautrin—

(L'Review de la Gynecologia). His article is the most accurate and painstaking observation to be found on the subject.

It is rather difficult to arrive at any conclusion as to their relative frequency by studying the reported cases or by searching hospital reports, as these border-line tumors are generally very loosely classified. Probably the most accurate data at our disposal may be had from St. Marks Rectal Hospital, London, in which twenty-five villous tumors are tabulated among 42343 patients with rectal ailments.

The chief point of interest about these tumors is that a certain percentage of them show a marked tendency to undergo malignant degeneration. From the histories of the thirteen cases cited by Ricketts, including one of his own, we learn that three recurred and three did not. Those with a broad base, later became malignant, while those with a pedicle did not. Of the other seven cases no mention was made as to the final outcome.

Goodsall and Miles have had twelve cases—eight in men and four in women, of which number two ultimately became carcinomatous.

From careful study of these cases and several others the author believes that if there is a distinct pedicle without infiltration of the adjacent mucous membrane, tumors of this type are generally benign and if completely removed by ligation, or otherwise, there is but little likelihood of their recurring. On the other hand, if the base is broad, whether there be induration or not, a total extirpation of the rectum should be advised.

Another point of some interest borne out by a study of these cases is that the longer the condition has existed the less likely is it that the growth will prove malignant. The case now reported seems to bear out this statement.

Mrs. M., forty years of age, was referred by J. H. Vaughn, of Everett, Mass., January 5, 1907. She was well-nourished, weight about normal, but anemic, with sallow complexion. Had had indigestion for years but in other respects was in good health. For the past six years had noticed small rectal hemorrhages. During the year previous the hemorrhages had become more profuse and the mass was always protruded at the anus during defecation and even after slight exertion when walking.

She had to go to the toilet several times during the day and to get up two or three times at night, when she would pass one-half cupful of blood-stained mucus; also considerable mucus would at times escape with flatus. For two months, tenesmus had been present nearly all the time. She did not complain of anal or sacral pain.

Rectal examination. Sphincters, peri-anal skin and anal canal were perfectly normal. In the rectum was felt a slippery growth with a band-like pedicle one inch wide by one-half inch thick, attached obliquely with the long axis of the rectum. By careful manipulation the writer was able to bring outside the anal orifice, a lobulated cauliflower like mass, the size and shape of a large English walnut, from which there was a gentle oozing of blood while it was held outside by the sphincters.

Operation January 8, 1907. The sphincters

were stretched after infiltration with one quarter of 1 per cent cocaine solution and the mass drawn down with the finger and the pedicle infiltrated and clamped about half an inch from the margin of the tumor.

The pedicle was then transfixed on the proximal side of the clamp and ligated with pagensteckere No. 5 in three sections and the pedicle cut away on the distal side. An ounce of bloody mucus escaped from the anus during the dilation.

The operation was easily performed and with but little discomfort to the patient under local anesthesia.

Over three years have now elapsed since the case was operated upon and as yet there is no sign of recurrence.

The report of Dr. Louis Hoag upon specimen, January 8, 1907, was as follows: "Pedunculated cauliflower tumor of flattened spheroidal form of pale brownish red color and $4 \times 3\frac{1}{2}$ cm. in size.

"Surface quite regularly broken by deep narrow pits and furrows between the among hundreds of small hemispherical ovoid and spindle-shaped lobules ranging from 1 to 3 mm. in diameter. Such are soft, juicy but not necrotic and of uniform pale brownish red color. Surface always smooth and glistening. Irregularly distributed are deeper clefts outlining pyramidal divisions of the tumor, each bearing upon its base, which is directed outward, a number of the lobules just described.

"Toward the periphery of the cross-section of the tumor the lobules are of uniform soft consistency and of uniform pale-brown red color. Centrally the pale pedicles, which are about 4 mm. in diameter, enter the tumor at a sort of hilus and its white fibrous tissue bearing numerous small blood-vessels spread out to be finally lost in the similar tissue of the apices of the various pyramidal divisions of the tumor."

"SIGNIFICANCE OF RECTAL HEMORRHAGE."

By Louis J. Krouse, M. D., of Cincinnati, Ohio.

Who called the attention of the profession to the importance of making a more careful examination of every case where there is bleeding from the rectum. He stated that rectal hemorrhage must not be considered conclusive of the existence of piles. Many other diseases besides piles are accompanied with bleeding. He laid great stress on the importance of diagnosing malignancy in its early stage so as to give the patient a better chance of recovery. Many cases of malignant disease of the rectum, whose only symptom is hemorrhage have been overlooked and the patient sacrificed which would not have occurred had the family physician insisted upon a local examination thereby diagnosing the disease in its incipency before it had gone beyond the operable stage. He further stated that every patient is entitled to a thorough examination; and physicians are in duty bound to use all the means at their command to accomplish it. As Murray very aptly expressed himself, "Thus a case that today would be operable and a cure result, if diagnosed, would be inoperable in six months

or a year, and death result." The author reported numerous cases where a correct diagnosis had not been made on account of the negligence of the family physician. Some had been operated upon for bleeding piles which subsequently turned out to be cancer. He concluded his article with the statement "that earlier recognition of malignancy would add materially to the future welfare of the patient which can be obtained by surgical measures, and it, therefore, behooves the general practitioner to be on his guard and examine carefully every case of bleeding so as to detect malignancy in its incipient stage."

"ANO-RECTAL AFFECTIONS OF INFANCY AND CHILDHOOD."

By A. J. Zobel, M. D., San Francisco, Cal.

This paper briefly described those ano-rectal affections of infancy and childhood which may appear on one's daily work or in consultation practice.

From the first hour after birth the ano-rectal region is of vast importance. At that time malformations may be determined and proper relief promptly afforded.

The various malformations were enumerated and briefly described. Some of these abnormalities pass unnoticed throughout a long life, but others are the source of great discomfort and distress.

Mention was made that while hemorrhoids are common in adults the possibility of their presence in the young is rarely considered. Yet they may appear in children of tender years. The various causes for hemorrhoids in the young were reviewed in this paper.

Malignant growths of the rectum while rare are occasionally met with. Cases were quoted where the disease was found in children as young as five years of age.

Benign growths are more common. Adenoma is the most frequent of these. They are often diagnosed as internal hemorrhoids, and like them, may become strangulated. They may exist for some time and attain quite a size without producing any symptoms until strangulation occurs.

Fissure of the anus is believed by the writer to be present more often than it is usually diagnosed. It may cause severe crying in nurslings. May cause reflex symptoms to appear which for a time may baffle the diagnostician. Some of these may resemble coxalgia. The incautious and improper introduction of syringe nozzles and thermometers into the anal canal frequently cause fissures. Other causes were also mentioned.

Especial stress was laid on the subject of pruritus ani in children. The writer believing it to be a very frequent source of great discomfort and torment to the little ones. It is very rarely suspected or diagnosed and he believes that it accounts for much of that peevishness in these little ones for which no cause can usually be assigned. The child is seen to rub his anal region saying, "It hurts." Does not complain of itching. Seems to misinterpret the sensation. He has found superficial lesions of the anal mucous membrane in these cases, and as the symptoms dis-

appeared when local treatment was instituted he feels assured that these were the cause of the trouble.

Fistulo-in-ano is met with occasionally in children and even in nurslings. While it may be tubercular, it may also be of a congenital nature.

Ischio-rectal abscesses are met with even in early infancy. When incised they rarely end in fistulae.

Prolapse of the mucous membrane of the anus and rectum is a common condition during the second and third years of life. Long continued tight binding in babyhood may be the starting point. Diarrhea is the most common antecedent. Anything that induces prolonged and severe straining at stool may be a cause. Some of these causes were mentioned.

The varieties and causes of proctitis were also dwelt upon. Proctitis is often taken for ordinary catarrhal diarrhea due to improper feeding. It is advised that when a gonorrhea of the genital tract exists in children that a secondary infection of the ano-rectal region should always be considered.

It is hoped that this reminder that infants and children have ano-rectal troubles, as well as adults, will lead to more thought being given in this direction, and that it will bear fruit in bringing relief to some of these little sufferers.

"THE TREATMENT OF RECTAL FISTULA."

By J. Rawson Pennington, M. D., of Chicago, Ill.

Who referred to three methods, viz.: simple incision; the injection of bismuth paste; the incision or excision with immediate suture (proctorrhaphy).

Of the *simple incision* he said: Those of us who are operating quite frequently for this malady know its disadvantage, drawbacks, and frequent failures to cure. That this operation has done more than any other, unless it be that of the ligature or clamp and cautery operation for hemorrhoids, to bring disrepute upon rectal surgery. That the laity dread a rectal operation more than any other surgical procedure because of the fear of pain, the fear of recovery and the fear or loss of control over the bowels. Yet, we know that each of the above operations in the hands of experts gives good results. Concerning the injection of bismuth paste, he said: To treat a rectal fistula, the paste is liquefied by heating in a water-bath and injected into one of the openings with a metal or glass syringe. The other opening or openings are kept closed by an assistant while the injection is being made. Enough force is used until one feels reasonably sure that all tracts and diverticuli have been filled. The paste may be forced into some line of cleavage if too much tension is used and carried along this line to some distant organ or healthy tissue and deposited there with deleterious results.

Of excision or incision with immediate suture (proctorrhaphy) he said: This method is the most rational of all surgical procedures, that he dissects and removes the entire tract when a probe or director can be passed through the fistulous channel and into the rectum. That he then

searches out and removes any diverticuli or tracts connected with the main tract. If this can not be, or should not be done, he then incises the fistula and dissects out all granulation tissue. If needs be, the wound is disinfected with carbolic acid and alcohol.

Suturing the wound may be done by lembertizing the line of incision from its termination in the rectum to the anus. The ends of the severed sphincters as well as the deeper portions of the incision are next brought together with interrupted cat-gut sutures. The skin and fascia are sutured with interrupted silk worm-gut. He dresses the wound with iodoform or plain gauze and applies a T bandage. He maintains that proctorrhaphy, or the paste, or a combination of the two, offers the nearest approach we have to the ideal method of treating extensive rectal fistula.

"THE TUBERCULIN REACTION IN CASES OF PERI-RECTAL INFECTION."

By Collier F. Martin, M. D., of Philadelphia, Pa.

The author was so impressed with the frequent coincidence of pulmonary tuberculosis and perirectal infections that he began a series of tests and examinations to determine their relation.

He uses the Moro tuberculin reaction, combined with physical and bacteriologic examination.

In his preliminary report of thirty-six cases, which he divides into two groups, he got the following results:

Group I. Rectal pyogenic infections, including here fistulae, abscesses and deep rectal ulcerations. There were twenty positive reactions out of twenty-one cases. The negative case was one profoundly tuberculous.

Group II. Non-pyogenic rectal cases. There were eleven cases, including hemorrhoids, fissure, and catarrhal proctitis, with three positive tuberculin reactions. This he holds, is probably the ratio of tuberculosis in this class of cases. One negative case in this group was intensely tubercular, with extensive lung lesions evident, and with abundant tubercle bacilli in the sputum.

Accepting the tuberculin test as a specific one, he got 100 per cent positive in Group I, and about 36 per cent in Group II. The four cases giving negative reactions, yet being proved tuberculous, by sputum examination, provided to be of very low resistance, two dying in a few months and two, at present, in a precarious condition.

He emphasizes "continued history taking" as being extremely valuable to the proper appreciation of the case.

The author places particular stress on the prognostic value of the tuberculin test.

Accepting the positive reaction to tuberculin as indicative of a tuberculous lesion somewhere in the body, his conclusions are as follows:

1. Two consecutive, negative reactions, with no physical signs in evidence, in conclusive proof of the absence of such lesions.

2. Two consecutive negative or feeble reactions, with physical signs of a lesion somewhere, is indicative of a very grave prognosis.

3. The degree of the reaction is directly proportionate to the degree of the resistance of that individual.

4. That the tubercule bacillus, like no other, reduces the bodily defences to pyogenic invasion

5. That in practically all rectal pyogenic infections, there is a tuberculous lesion somewhere in the body.

6. That the classification of perirectal infections into tuberculous and nontuberculous is untenable.

His investigations have caused the author to raise the following questions:

1. Is the primary tuberculous lesion pulmonary?

2. Is the local infection tuberculous?

3. Do the tubercule bacilli gain entrance into the body through the respiratory or the alimentary tract?

4. Is such infection carried to the rectal and perirectal tissues by the blood current, the lymphatics, or directly, by the fecal current?

5. How does the tubercle bacillus influence the pyogenic infections—locally, as in mixed infection, or by lowering the body-resistance to the invasion by pyogenic bacteria?

"LANE'S CONCEPTION OF CHRONIC CONSTIPATION AND ITS MANAGEMENT."

By A. B. Cooke, M. D., of Nashville, Tenn.

In his monograph entitled "The Operative Treatment of Chronic Constipation," Mr. Lane first defines the scope of the treatise by stating that the term, chronic constipation, as he employs it, includes all those conditions which are "the consequences of the accumulation of material in the intestinal tract for a period sufficiently in excess of the normal to produce on the one hand alteration in the gastro-intestinal tract and in other viscera, and on the other hand toxic changes from absorption." The fact is emphasized that while constipation is usually marked by infrequent hard stools, there may be a daily evacuation, and in exceptional cases the motions are loose and frequent.

The two chief pathologic factors in the production of chronic constipation, according to the author, are enteroptosis and acquired mesenteries or adhesions, the latter resulting not from inflammation, but being developed to oppose the displacement of viscera, the tendency to which exists whenever the erect posture of the trunk is assumed. The displacement and fixation of the several portions of the colon in faulty positions result primarily in defective drainage, and secondarily in auto-intoxication and pathologic changes both in the gut itself and in the other abdominal viscera.

After describing these changes in detail, the author proceeds to discuss their immediate and remote effects, advancing the idea that in many cases diseases of the appendix, gallbladder, stomach, duodenum, pancreas, kidneys, ovaries, etc., must be regarded as sequellae of chronic constipation. In addition the phenomena resulting from

toxic absorption are graphically described and the importance of their recognition stressed.

With reference to treatment Lane states that "in no circumstances should operative interference be contemplated till the surgeon has satisfied himself that every means of treatment has failed, whether medical or mechanical." The surgery indicted depends upon the conditions present. In mild cases in which nonoperative measures have failed, division of the adhesions and constricting bands may be effective. Sevrer cases call for more radical surgery consisting either in dividing the ileum and anastomosing it with the sigmoid or upper rectum, thus short-circuiting the fecal current, or, when pain is a prominent factor in the case, removal of the colon in addition.

The writer of the paper, after personal observation of Lane's work, regards his conception of the nature and management of the malady with much favor and thinks it entitled to serious consideration at the hands of the profession.

"A UNIQUE CASE OF LACERATION OF THE SPHINCTER ANI."

By Dr. A. B. Cooke, of Nashville, Tenn.

On February 26, 1910, the patient, a boy, seven years old, was brought to him at St. Thomas Hospital, accompanied by his father and physician. The following remarkable history was related: About noon on the day named the boy, who lived on a farm, went out to his favorite place behind the corncrib to attend to a call of nature. While engaged in the act, a pet dog, a hound of middle size, came up from the rear and mounting him affected entrance into the anus and became accoupled. The boy's out cries quickly brought his mother upon the scene. The dog had reversed his position and was in the same relation to the boy as is ordinarily assumed in the natural act with a bitch. The mother's excitement was naturally marked and in her frantic efforts to disentangle the two she used considerable violence and finally succeeded in separating the dog.

The family physician on his arrival found that the hemorrhage had practically ceased, but upon inspection of the bowel found the parts were badly lacerated and advised the patient's removal to Nashville for treatment.

Dr. Cooke's examination found very little evidence of external injury. Traction upon the anus, however, showed that several internal lacerations of considerable extent were present. Under general anesthesia the deepest of these was found to be in the middle line posteriorly, extending from a point two inches up the rectum through the sphincter muscles, and out upon the skin surface for a distance of approximately one inch. The external sphincter was torn in two places at this site, one tear being complete, and other partial. Anteriorly there was a second laceration, into but not through the fibers of the sphincter. In addition there was a number of minor tears in the anal margin involving the superficial tissue only.

Fourteen interrupted cat-gut sutures were used in repairing the posterior laceration, and four in the anterior one. The others did not require suturing. The result was entirely satisfactory.

Union was prompt and complete and the patient returned home in two weeks with perfect sphincter control.

"MULTIPLE ADENOMATA."

By Geo. W. Combs, M. D., of Indianapolis, Ind.

An adenoma is the result of an increase in number and a crowding together of elongated and enlarged secreting follicles. It is an exaggeration of epithelial cells. This epithelium is prone to penetrate the basement membrane. When it does so and reaches the muscularis and other sub-mucous tissues it is malignant. Irritation causes the transformation from the benign to the malignant. This irritation may be through the normal function of the bowel, that caused by parasites, or as a result or surgical removal singly. Surgical disturbance in situ of a benign adenoma, a widening experience shows, will be followed by malignancy.

A case was reported in which occurred the malignant degeneration without surgical interference. This does not necessarily show an inherent tendency of benign adenomata to malignancy, but the adenomata, through the factor of irritation, predisposes the patient to cancer. In the case to which reference is made above, one or more of the adenomata low down in the rectum had undergone the malignant transformation. On account of the extent of involvement and the extreme exhaustion of the patient, extirpation of carcinoma was deemed inadvisable, but a left colostomy was made reaching a portion of the sigmoid above the growth limit. The tenesmus and diarrhea were at once relieved and the patient made comfortable until the carcinoma reached the cutaneous margin. Through the colostomy lavage was administered, the solutions being normal salt, boracic acid and sodium salicylate. The adenomata between the colostomy wound and the carcinoma, through functional rest of the bowel and cleanliness, disappeared.

If degeneration has not taken place a colostomy right or left, high enough to get above the growth limit, is advised and through this soothing and cleaning solutions used, rather than the removal of the whole bowed proximalward above the high limit of growth. The latter is a very serious operation for the strong and one in which the mortality will necessarily run high in these patients, as they present themselves usually late in the disease.

After malignant transformation has taken place, it would seem useless to remove the malignant portion unless the entire bowel involved may be removed at the same time.

"SOME OBSERVATION ON THE PATHOLOGY OF MULTIPLE ADENOMATA."

By Jerome M. Lynch, M. D., of New York City, New York.

Who presented the results of his observations on two interesting cases of rectal multiple adenomata. He hoped that others would be sufficiently interested to record and report their own

cases, and that our admittedly scanty information on the pathology of this unusual and serious diseased condition would be materially added to.

It was his impression that approximately 46 per cent of recorded cases of these adenomata terminate in cancer and that the ultimate results are commonly fatal; yet the scientific investigation of these tumors has been so comparatively rare and isolated that our actual knowledge of the causes and conditions is lamentably meagre. It may be said that the pathology is not at all established.

LOCATION.

According to Lichtenstein the relative number of instances of these tumors in the different parts of the intestinal tract is indicated in the following arrangement (the most frequent site of occurrence being in the rectum) rectum, ileum, colon, ilio-cecal valve and duodenum.

Malignant degeneration naturally affects the parts named in about the same comparative order of distribution, with the exception of the ileum; this latter being less exposed to insult by reason of the fluid condition of the feces in that region.

It may be noted that these tumors usually manifest themselves in patients between twenty-five and thirty-five years old and the malignant degeneration consequently occurs much earlier on than cancer usually occurs.

About 50 per cent of the cases collected from the literature were under thirty-five years of age.

A brief summary of the current theories followed.

PATHOLOGICAL FINDINGS.

Several tumors were removed from each case, from the smallest size to the largest. The smaller tumors (that is, those that had recently sprung up) were shown to be composed mostly of granulation tissue, which showed numerous small blood vessels and interstitial fibroblasts. The entire structure is infiltrated by an acute exudate of leucocytes and serum, showing an acute inflammatory process. At the base of the polyp are a few slightly hypertrophied but rather typical glands. The surface epithelium over the polyp shows complete desquamation. The tumor appears to be composed almost entirely of an inflammatory granulation tissue.

DIAGNOSIS—INFLAMMATORY TISSUE POLYP.

The section through the large polyp, taken from the same individual as the above, but at an advanced stage, showed a growth composed of adenomatous glandular proliferation. There is a narrow peripheral margin in some places about the growth, which shows granulation tissue. The greater part of the growth about the periphery is composed of simple adenomatous glandular proliferation. Throughout the polyp there is an exudate of serum and leucocytes, the latter showing a predominating number of eosinophiles. There is complete desquamation of the superficial epithelium. Some of the glands in the adenoma appear typical; but the greater number are very much larger than those of the rectal mucosa, and are in a condition of marked hyper-secretion.

DIAGNOSIS—ADENOMATOUS POLYP.

These two reports were selected as being typical of what was found in the small and in the well-

developed tumor; and go to show an inflammatory starting point, with a later proliferation of glandular tissues, which corresponds, to a great extent, with the findings of Lebert and Schwab. Much more might have been learned had the writer been fortunate enough to have secured a post-mortem on the case that died, as he was confident some of the tumors in the upper part of the sigmoid would have shown carcinomatous degeneration. Again, a section through a growth, down into the bowel, might have thrown some further light on the subject.

He hoped to continue the investigation when another opportunity offered.

Reports of cases followed.

"SKIN MANIFESTATIONS OF AMEBIASIS."

By Jno. L. Jelks, M. D., of Memphis, Tenn.

The author had observed cutaneous affections among a number of persons suffering with chronic amebic infection. In April, 1909, he reported cases before the annual meeting of the De Soto County Mississippi Medical Society. In May, 1909, he made similar allusions to these conditions before the annual meeting of the Arkansas State Medical Society. Again in April, of the present year, at the Tennessee State Society in a paper, "Amebiasis, complicated in one instance by Pellagra, in another, by eighteen Adenomata," he referred to these associated conditions.

In one case, observed two years ago, with very chronic amebic infection and ulceration, the patient had for more than forty years observed that the skin lesions, which were erythematous and macular, and at times edematous, depended very greatly upon the condition of the bowel at that time. This patient was returned to her family physician as incurable owing to the scarred, distorted and stenosed condition of the bowel. She has since died, apparently from exhaustion produced by a most extensive desquamative dermatitis.

Another case, which was observed in the winter of 1908-1909, of chronic amebic ulceration, with liver abscess complicating, presented extensive macular, papular and pustular skin lesions which quickly cleared up under treatment, which was directed solely to the intestinal infection and ulceration.

Recently a case was presented, which had been diagnosed by several able physicians and skin specialists as one of pellagra. The case presented all symptoms of amebic infection, which preceded the skin lesions, and the author found the ent-ameba histolytica in the muco-purulent material taken from the rectum, and concluded that the condition known as pellagra may have its solution as to etiology when systematic examinations are made for parasitic infections and intestinal conditions.

The author expressed the belief that those may help explain the prevalence of the condition known as pellagra in the south. A report of six cases were presented in support of his views and he emphasized the singular co-incidental, if not consequential, skin lesions in so many chronic amebic cases which have been observed by him and which responded to treatment directed solely

to the intestinal infection and ulceration. He quotes other authority both in this and other countries which are supportive of his views.

"INCONTINENCE FOLLOWING RECTAL OPERATIONS."

By Geo. B. Evans, M. D., of Dayton, Ohio.

We understand the external sphincter to be a flat plane of muscular fibers, elliptical in shape, and intimately adherent to the integument and joining with the peronei, levator ani and accelerator urinae. It is a voluntary muscle and supplied by a branch of the fourth sacral nerve.

The internal sphincter is but a muscular ring, half an inch in breadth, in thickness two lines, and but an aggregation of the involuntary circular fibers of the intestine. Evidently the only true sphincter ani is the external—the internal sphincter ani is not subject to volition—and its sphincteric influence must be largely due to the support afforded it by the practically amalgamated muscles which form the floor of the pelvis and whose main function is the support of the hollow viscera of the pelvic cavity. Would it, therefore, be illogical to believe that the internal sphincter is not, neither can it be made by any surgical procedure an efficient voluntary constrictor? Certainly, it is true that efficient and satisfactory sphincteric function is dependent on normal support of the bowel by a normal muscular floor, with a normal interdependent power of sphincter muscles, hence any trauma which interferes with muscular function disables proportionately to the extent of the injury.

That incontinence does follow division of the external sphincter is not denied and when their division becomes a necessity, the best way, if there is one, of making the incision should be chosen. Can we hope that ere long there will be a method of cure for fistula-in-ano that will exclude even the possibility of incontinence?

Considering the anatomical conformation of the perineum, the mutual dependence of perfect function, I would admonish those engaged in rectal surgery to not forget that indifferent and multiple injuries (even surgical injuries) should not be indulged in, for fear of a result that would prove more painful and unendurable than the condition which indicated operative interference.

We believe that incontinence can be obviated by relieving the tension of the fibers of the levator ani muscle at their attachment to the external sphincter, or both the external and the internal sphincter by nicking the fibers of said muscles on either side of the fistulous tract, and thus permitting an incision of the muscle at right angles to the same.

"ULCERATION OF THE RECTUM IN PREGNANT WOMEN AND THE PART IT PLAYS AS A FACTOR IN ABORTIONS; WITH A REPORT OF CASES."

By Leon Straus, M. D., of St. Louis, Mo.

Sixteen years devoted to diseases of the rectum exclusively has afforded the author the opportunity to see and classify a large number of cases of irritable ulcer of the rectum in pregnancy, to

say nothing of a much larger number not associated with this condition. He has kept a very careful record of these most interesting cases and has classified them with reference to certain conclusions, namely, that it is a factor not infrequently overlooked. Then, too, many general practitioners make the contention that an operation is uncalled for and unwarranted, that is to say, an operation will certainly produce the very result which it is intended to avoid.

He dissented absolutely from this contention and for that reason reported the results of his work along this line and his final conclusions. He has operated twenty-four times for the result of irritable ulcer of the rectum in pregnant women. Not all of these operations were made to prevent abortion. In fact only fourteen had had one or more abortions. That leaves ten for which the operation was made to relieve the distressing pain from which these patients suffer. A number of these cases are unique and teach a lesson apart from the average case. The history, symptoms and results of several such cases were reported and the following conclusions were drawn:

First.—That irritable ulcer of the rectum is not an infrequent factor in abortion and miscarriage.

Second.—That the local lesion is not recognized by the general practitioner as a factor in abortion and miscarriage.

Third.—That you will meet strong opposition to operative interference by the general practitioner.

Fourth.—That you can and should operate at any period of the pregnancy if indicated.

Fifth.—That the danger and only danger is in leaving the fissure without operating.

Sixth.—That you may and will often have to assume the entire responsibility for the outcome of the operative procedure.

Seventh.—That we proctologists should teach on the by-ways and highways of surgery the invariable indication for surgical interference in these unfortunate cases.

"A CASE OF LOCALIZED DERMATITIS FOLLOWING THE USE OF QUININE AND UREA AS A LOCAL ANESTHETIC IN A CASE OF FISSURE AND HEMORRHOIDS."

By Arthur Hebb, M. D., of Baltimore, Md.

Three days after the use of a 1 per cent aqueous solution of quinine and urea, as a local anesthetic in a case of fissure and hemorrhoids, erythema over the ischio-rectal region developed followed by epidermolysis, then a profuse serous discharge which continued for four or five weeks. The wound showing little tendency to heal during this time.

"A BRIEF REVIEW OF THE HISTORY OF THE AMERICAN PROCTOLOGICAL SOCIETY FROM ITS ORGANIZATION IN 1899 TO DATE."

Read by the Secretary of the Society, Lewis H. Adler, Jr., M. D., Philadelphia, Pa.

The author believed the presentation of this paper would help to impress the profession with

what had been accomplished, not alone for the individual profit and pleasure of the members of the organization, but likewise for the benefit of the profession as well as for the advancement of the science of medicine.

Attention was called to the fact that as the surgeon had rescued surgery from the "Society of Barbers and Bathers", and the obstetrician the practice of midwifery, from the ignorant and often grossly careless midwife, so the proctologist, largely by means of this organization, has advanced diseases of the rectum and sigmoid from the domain of quackery to a recognized specialty, and has removed from the hands of the charlatan to a great extent, a fertile field for playing upon the credulity and ignorance of the populace.

The first effort to organize a National Proctologic Association was made in June, 1895, when the American Medical Association met in Baltimore. Dr. Samuel T. Earle at that time called together the following proctologists to meet at his house: Drs. James P. Tuttle, Samuel G. Gant, T. C. Martin, Joseph M. Mathews, and Leon Straus. The subject was talked over informally, but no definite action was taken.

Including the present meeting at St. Louis, the society will have convened twelve times. The respective meeting places, starting with the first session in 1899 at Columbus, Ohio, were: Washington, D. C.; St. Paul, Minnesota; Saratoga Springs, New York; New Orleans, Louisiana; Atlantic City, New Jersey; Pittsburg, Pennsylvania; Boston, Massachusetts; Atlantic City, New Jersey; Chicago, Illinois; Atlantic City, New Jersey, and St. Louis, Missouri.

The following presidents, in the order named, have been Drs. Joseph M. Mathews, James P. Tuttle, Thomas Charles Martin, Samuel T. Earle, William M. Beach, J. Rawson Pennington, Lewis H. Adler, Jr., Samuel G. Gant, A. Bennett Cooke, George B. Evans, Dwight H. Murray and George J. Cook.

Special attention was called to a paper by Dr. Wm. Bodenhamer, in 1903, upon "Atony of the Rectum," read by title, the author being ninety-four years of age.

The number of papers presented at the different meetings have varied from twelve to twenty-eight. The total number of articles read at all meetings, exclusive of the present session, have been one hundred and eighty-seven. The first year a small volume of transactions was issued. This, however, was discontinued until 1908, when it was decided to issue an annual volume for three successive years. Two have already been issued and the remaining volume will be published, following the present meeting. It seems to the writer that the publication of the transactions annually should be made a permanent feature. In this manner they become a public and permanent record of the work accomplished by the society and do more to add dignity to and further the aims of the organization than anything else. Knowing that the transactions will be published, the members will be stimulated to present papers at each meeting, and exert their best efforts in their preparation. Furthermore, the discussion of such papers will be more energetically entered into and more carefully considered because of the

knowledge that such discussion will be permanently recorded.

The membership began with thirteen and at the present time numbers thirty-seven active members. Five fellows have resigned for various reasons and one has been transferred from the active to the honorary list. Nine honorary fellows have been elected as follows: Sir Charles B. Ball, Dublin, Ireland; Prof. Dr. Sonnenberg, Berlin, Germany; Dr. A. Tierlinck, Grand, Belgium; Mr. F. Swinford Edwards, London, England; Mr. W. W. Walis, London, England; Mr. P. Lockhart Mummery, London, England; Mr. W. Ernest Miles, London, England; Dr. Edmund Andrews, Chicago, Ill.; Dr. Wm. Bodenhamer, New Rochelle, N. Y.—the two later being now deceased.

The average attendance at the annual meetings has been over ninety-five per cent of the membership, a most excellent indication of the interest shown in the work of the organization.

In the body of the article reference was made to a number of important papers presented from the inception of the organization, to date, and from a cursory review of these varied papers selected for special mention, it will seem that the subject of proctology in all its phases has been amply covered at one time or another; many new instruments have been devised and exhibited; many original methods of operation have been suggested; and advanced methods of treatment introduced.

The discussion of the papers presented have been entered into freely both by members and visitors. Criticisms, favorably or otherwise, have been made with impartiality, but never in the entire history of the organization has one word been uttered to impair the harmony of a fellowship which has endeared itself to its members and strengthened as the years have gone by. It is perhaps unusual in so large a body of men, working in the same field and with the same objects in view, not to find occasionally jealously or personal antagonism in some form or manner. The fact that this has happened in the history of the organization, is due perhaps, somewhat to the care exercised in the selection and election of its members, and the intimacy and close friendship existing between them.

Those interested in the society's welfare cannot be but well satisfied with the result thus far obtained. But what of the future? Can the same interest be maintained, and, is so, can it be along similar lines, or is it possible to awaken further interest by the introduction of some new procedures and ideas? Possibly the discussion of some one subject as the chief feature of the program, to be opened by one or more men, previously assigned different parts for consideration, to be followed by a general discussion, a suggestion which was made at the first session, but so far as the writer has been able to ascertain never carried out, might prove a means of increasing interest in the work of the organization.

"REMARKS UPON CECOSTOMY AND APPENDICOSTOMY."

(With exhibition of a new entero-colonic and appendiceal irrigators.)

By Samuel G. Gant, M. D., New York City, N. Y.

Dr. Gant called attention to the remarkable usefulness of appendicostomy and cecostomy in the direct treatment of bowel diseases and made the point that the latter was preferable in this class of cases and would sooner or later supersede appendicostomy. He also exhibited a new appendiceal irrigator which could be inserted during operation and which permitted irrigation to be started immediately in aggravated cases of diarrhoea and intestinal auto-intoxication.

Next he showed a new entero-colonic irrigator by means of which the large and small intestines could be irrigated separately or at the same time.

He claimed that this instrument is indicated in the treatment of all forms of enteritis, enterocolitis and the different types of ulcerative diseases of the colon and also in the treatment of typhoid fever, intussusception, peritonitis, and parietic affections of the intestine.

This irrigator he maintained was useful as well for studying the contents of the bowel, intestinal feeding, the direct employment of cathartics, enteroclysis and for many other useful and practical purposes.

"A REPORT OF A CASE OF POST-OPERATIVE DELIRIUM."

By Samuel T. Earle, M. D., of Baltimore, Md.

The author stated that while post-operative delirium was quite common before the days of antiseptic surgery, it was due then in the majority of cases to septic infection. The condition is rare now, except when due to shock, and then only as a result of a grave operation.

The minor character of the operation preceding the attack in the present case makes it more interesting, which is doubtless accounted for by the age of the patient.

Case: Dr. A. T., aged seventy-eight, had suffered with hemorrhoids since before the Civil War (1861), but had persistently determined not to be operated upon. Early in May, 1910, they became thrombosed and inflamed, at which time he consented to an operation.

The usual hypodermic of 1/6 of a grain of morphine atropine 1/120, and strychnine sulphate 1/30, was administered prior to the anesthetic. Fearing the effect of ether or chloroform, on account of his age, it was decided to administer a mixture of nitrous oxide gas and oxygen. This mixture did not keep him thoroughly anesthetized, consequently the operation was not completed as quickly as usual and as a result there was more blood lost, which did not exceed two or three ounces.

The operation was completed, he regained consciousness in a few minutes but almost immediately became very excited and delirious. Think-

ing this might be due to pain, $\frac{1}{4}$ of a grain of morphine was given at the end of two hours from the time he received the first hypodermic; a third dose was given at 8 p. m., three hours following the second dose. The patient continued very delirious during the night and for three days following. The second and third nights we were able to quiet him for a few hours by hyoscine hydrobromide grain $\frac{1}{50}$, and morphine $\frac{1}{6}$ administered hypodermically. For the remainder of the first week, the hyoscine hydrobromide $\frac{1}{50}$ was sufficient to give him a quiet night, but the delirium continued for one week from the time of the operation, but not nearly so active as during the first few days and with some lucid intervals. His temperature did not exceed $99\frac{1}{2}$ the first three days, but on the fourth day it reached 100.5 and again on the seventh day, for a short time without any apparent cause, otherwise the patient made an excellent recovery, and was able to be about the house in about ten days after the operation.

"APPENDICOSTOMY."

"A CONSIDERATION OF THE PRESERVATION OF THE BLOOD-SUPPLY OF THE APPENDIX IN THE TECHNIC OF THE OPERATION."

By Frank C. Yeomans, A. B., M. D., New York City, N. Y.

Case: Mrs. X. was operated upon March 21, 1908, for ulcerative colitis. While performing the appendicostomy, one of the cecal vessels going to the appendix was punctured and tied. Three days later the appendix sloughed and a fecal fistula formed. The colon healed with irrigations, the fistula closed and the patient is well today as regards her bowel. This experience and similar experiences of several colleagues led the writer to a study of the circulation of the appendix from a surgical standpoint.

Embryology shows the appendix to be the vestige of the original head of the cecum which failed to participate equally in development with the rest of that organ; and at an early period of embryonic life, not possessing a mesentery, derived its sole blood-supply from the cecal vessels. The latter statement is true of the rudimentary and the fetal forms of appendix, even in adults. For all practical purposes the sole blood-supply of the vermiform appendix is from the posterior ileo-cecal artery through (a) its cecal branch, which sends one or more twigs to the appendix, and (b) its appendicular branch, which runs in the free border of the meso-appendix, sending several (usually 3-5) branches to the appendix. The cecal branch is constant and courses along the appendix on its mesenteric side, anastomosing with branches of the appendicular. Dissections of

a number of injected subjects, by the writer, demonstrated this arrangement of vessels to be practically invariable. As these vessels are by nature terminal in character, there at once became evident the importance of preserving both branches at operation, if the vitality of the appendix is to be maintained entire.

No trouble is experienced in avoiding the cecal vessels when uniting the cecum adjacent to the base of the appendix to the parietal peritoneum, as they indicate their position by visible pulsation. With the mesenteric branches it is different. Most appendices are falciform and one must free the mesentery in order to straighten the lumen sufficiently. There are two ways of accomplishing this: One is to ligate and cut the mesentery at a point far enough from the base of the appendix that the blood-vessels are preserved to that part of the appendix traversing the abdominal wall. The tip beyond the skin dies and infection is apt to extend between the appendix and abdominal wound, hence this procedure is objectionable.

The other method, here advocated and in practice found successful, preserves the arteries intact and consequently the vitality of the entire appendix. It is accomplished by separating the two layers of the mesentery at its juncture with the posterior mural peritoneum, beginning at its free border, and carefully displacing the cellular tissue with its contained appendicular artery and branches, as far as necessary toward the appendix. The two layers of peritoneum are then divided transversely to the base of the appendix, turned in and sewed, to obliterate the raw space on the posterior abdominal wall. Experience teaches that it is unnecessary to test the patency of the appendix, until the wound has healed; i. e., in 4-5 days.

Further precautions are not to obliterate any arteries by forceps, ligatures, sutures, torsion or tension in fixing the appendix in a position where it does not rest naturally, or by closing the wound too snugly about it.

By following this technic, the operation is without mortality and post-operative leakage of feces and hernia—the two troublesome sequelae of appendicostomy, are avoided. Appendicostomy should continue to grow in favor over cecostomy in all cases where prolonged irrigation of the colon is indicated.

"A CASE OF FIBROSIS OF THE RECTUM."

By J. A. MacMillan, M. D., of Detroit, Michigan.

The case presented an area of fibrous tissue an inch and one-half in width which encircled the rectum.

The lesion had recurred, was non-inflammatory, and caused no tendency to stricture.

Diagnosis—Possibly the result of syphilis.

COUNTY SOCIETIES

FOURTH DISTRICT

TODD DUNCAN, M. D., Collaborator.

The Medical Section of the Academy of Medicine of Toledo and Lucas County met on June 17. George H. Jones read a paper on "Diseases of the Stomach and Their Relation to Other Diseases." N. N. Sallume opened the discussion.

The Surgical Section of the Academy of Medicine of Toledo met on June 24, with the following program: "The Anatomy and Practical Consideration of the Rectum," Paul Hohly; discussion opened by Charles F. Tenney. "Treatment of Prolapse of the Rectum and of Internal Hæmorrhoids," J. A. Duncan; discussion opened by James Donnelly. "Colostomy for Rectal Stricture," P. J. Bidwell; discussion opened by G. M. Todd.

Dr. Hohly's paper was as follows:

Mr. Chairman and Gentlemen: In taking up the anatomy of the rectum and some of its practical considerations, I shall not go into detail and will omit the embryology and histology. I will, after the anatomy has been disposed of, enter briefly into some of the practical considerations of the anatomy of the part.

The muscles which have to do with the rectum and which aid in the control of the bowels are, levator ani, ext. sphincter ani and int. sphincter ani. The levator ani is a broad, flat muscle, situated on each side of the true pelvis, attached to the inner surface, from which it descends to unite with its fellow of the opposite side to form the floor of the pelvic cavity. It supports the viscera in this cavity and surrounds the various structures which pass through it. It is usually possible to detect an interval between the fibers arising from the pubes and those arising from the pelvic fascia. This marks the fact that the muscle described as one is really two, the pubo-coccygeus and ilio-coccygeus. The former takes origin from the posterior part of the ramus of the pubes and from the most ant. part of the tendinous arch of the levator ani muscle.

The muscle is a band about one inch in width, thickest at its external border where it overlaps the ilio-coccygeus, it passes downward, backward and inward, near the prostate in the male, the vagina and urethra in the female, and passes near the rectum where the two parts of the pubo-coccygeus meet. These fibres form a thick tendinous aponeurosis which is continued upward in front of the coccyx for some distance and finally divides into two lateral portions which have been called the ligamenta sacro-coccygea ant., and are inserted into the last one or two pieces of the sacrum and the first piece of the coccyx. A few of the fibers of the pubo-coccygeus muscle pass to the central tendon of the perineum, come in contact with but do not end in the rectal wall, descend in front of and close to

the ant. rectal wall and finally terminate in the anterior part of the sphincter ani. The ilio-coccygeus arises from the tendinous arch of the levator ani which is concave upward, the anterior end of the arch of the levator ani which is concave upward, the anterior end of the arch begins on the posterior surface of the superior ramus of the pubes, the post. end can be traced as far as the linea arcuata of the ilium, between these points it descends a variable distance, but always leaving the obturator canal free. The fibres course internally and downward, passing below the posterior portion of the pubo-coccygeus; the anterior fibers join those of the opposite side between the anus and the coccyx in a median raphe; the posterior fibres are inserted into the two last pieces and tip of the coccyx.

The sphincter ani externus is a thin, flat plane of muscle fibres, elliptical in shape and intimately adherent to the integument surrounding the margin of the anus. It measures three or four inches anterior-posteriorly and is about one inch wide opposite the anus. It arises from the tip and back of the coccyx by a narrow tendinous band, and from in front of that bone is inserted into the raphe of the accelerator urinæ and into the central tendinous point of the perineum, joining with the superficial transversus perinei and accelerator urinæ, many of the fibres are continuous with the accelerator urinæ in the male and with the sphincter vaginæ in the female. Like other sphincter muscles it is composed of two planes of fibres which surround the margin of the anus and join in a commissure in front and behind, some fibres crossing from side to side. It is supplied by a branch from the ant. division of the fourth sacral and the inferior hemorrhoidal branch of the int. pudic nerves. Its action is peculiar; first, like other sphincter muscles it is always in a state of tonic contraction, having no antagonistic muscle it keeps the anal orifice closed; second, it can be put in a condition of greater contraction under the influence of the will, as in defecation third, taking its fixed point from the coccyx, it helps to fix the central point of the perineum, in order that the accelerator urinæ may act from a fixed point.

The internal sphincter is a muscular ring which surrounds the lower extremity of the rectum for about an inch, its inferior border being contiguous to but separate from the ext. sphincter. The muscle is about one-sixth inch in thickness and is formed by an aggregation of the involuntary circular fibres of the intestine. Its action is entirely involuntary helping the ext. sphincter to occlude the anus.

The rectum begins at the middle of the third sacral vertebra, at the point where the mesentery which retains the sigmoid flexure usually terminates, it descends along the hollow of the sacrum and coccyx continuing above the levator ani, separated from these structures by the dense rectal fascia until it reaches the lower and back part of the prostate in the male and vagina in the female. Its length is about five inches, the termination is in the anal canal, situated in the thickness of the

pelvic floor, and is directed downward and backward, making a sharp angle with the rectum proper. It is sacculated, presenting when distended usually three dilations, of which the lower is the largest and is called the ampulla. These sacculi are separated by deep creases, the valves of the rectum, made up of all the coats except the two bands of longitudinal muscular fibres, one ant., the other post., which serve to keep the sacculations from being effaced.

The ampulla in the male extends against the back of the prostate, the lower part of the seminal vesicles and the terminal part of the vas-efferentia, from all of which it is separated by areolar tissue. In the female the end of the ampulla lies against the posterior wall of the vagina, from about the level of the os uteri to the junction of the middle and lower third. The anal canal is situated in the thickness of the pelvic floor, is deeply located between the nates, and extends downward and backward; it differs from the rest of the intestines in having no lumen under ordinary circumstances. The lower limit of the anal canal is at Hilton's white line, the ano-rectal groove, which is located just above the lower limits of the int. sphincter. This boundary is higher up than what is considered the lower boundary of the anal canal, and leaves for the length of the canal proper but one cm., while what is usually considered the canal is more than twice as long.

The mucous coat is thick and vascular, similar to the rest of the large int. in histological detail, the glands of Lieberkuhn are, however, much larger. The muscularis mucosa is better developed than in the rest of the colon. The columns of Morgagni are a series of vertical folds of m.m. passing from the anal canal upward into the rectum; about ten are usually present. The valves are semilunar folds connecting the lower ends of the columns.

The submucosa is lax, allowing the m.m. to be readily displaced, but at the lower end of the anal canal it is firmly attached to the muscle.

The muscular coat is thicker than in the colon, greater in the circular layer. The longitud. layer, although being continuous is for the most part collected ant. and post. into two bands which prevent the valves of the rectum from being effaced when it is distended. The int. sphincter is but an aggregation of the circular layer.

The function of the sphincters is to keep the anus closed. They differ in as much as the external, although acting automatically, is under the control of the will, and the int. is not. The levator ani has a more complicated, and in part, an apparently inconsistent action, since it may pull the anus upward and probably dilate it as it pulls its borders apart under the resistance of the descending feces, while at other times its ant. and post. fibres compress the sides of the canal. To the action of the levator ani is probably due the control of the feces after the division of the sphincters.

In relation to its diseases the rectum may be divided most conveniently into two portions. The pelvic, from of the rectum at the middle of the third sacral vertebræ to the reflection of the recto-vesical fascia. The perineal, which extends below

this point. The recto-vesical fascia, while perforated by blood vessels is impervious to pus and acts as an efficient barrier to its upward extension.

The pelvic portion is the terminaton of the hind gut, the anal portion results from the inflection of the ectoblast, the anal membrane lies between them and may be persistent, resulting in an imperforate anus; if thin, it may be carried down by the meconium to be felt and incised, but if thick and includes a fibro-muscular layer the remedy is not so simple and requires a careful dissection in order to obtain a satisfactory result. The frequent opening into the bladder, urethra or vagina is due to the persistence of the early association of the gut tube with the genitals and urinary canals in the common cloaca. It must be remembered that the rectum, because of the flatter curve of the sacrum and coccyx in children is straighter and is not so fixed by the surrounding structures, so is more movable, also that the m.m. always is especially so in children and any undue intra-thoracic or intra-abdominal tension may cause prolapse. The prolapse in the aged is due to a lessening of the muscular tonicity. The anal canal is so firmly held by the levator ani that it seldom enters into this condition.

The anatomical conditions favoring varicosities in the hemorrhoidal plexus may be summarized as follows: 1. Absence of valves and any muscular or fascial support between the veins and m.m. 2. The passing of the tributaries of the sup. hem. veins directly through the muscular wall of the rectum about three inches above the anus, causing intermittent constriction of the veins at this point. 3. The communication of the sup. hem. vein with the portal circulation, through the inf. mesenteric, thus subjecting the hemorrhoidal veins to periodic congestion, as during digestion, or when any pathological condition prevails in the liver. 4. The plexiform anastomosis between the inf. mid. and sup. hem. veins, which through a congestion causes a congestion of the inf. hem., a connection of the systemic circulation. 5. The subjection of the hem. veins to frequent fecal pressure. Thus it may be understood how, in the presence of the above predisposing conditions, hemorrhoids may result from either direct or indirect pressure or irritation.

Ulceration of the rectum or anal canal, whether from tuberculosis, inflammation or infection following trauma, or caused by dysentery, syphilis or cancer, is of anatomical interest in its relation to the vascular, lymphatic and nerve supply, also to the surrounding structures.

The nerve supply to the rectum is chiefly from the sympathetic and is characterized by little sensibility. The anal canal is supplied by the cerebro-spinal system through the fourth sacral and pudic nerves and is extremely sensitive. These facts explain the absence of subjective symptoms when the rectum is involved, even by major pathological conditions, and likewise the great pain from minor affections of the anus. The associated vesical irritation, muscular cramps, lumbar and illiac pains, and the post-operative retention of urine.

The great power conferred upon the external sphincter through its abundant nerve and vascular supply, and its almost constant reflex spasm

which is exerted in overcoming the peristalsis of the intestine, causes the ext. sphincter to act as an obstacle to the healing of ulcer and involving the anal canal. It is therefore requisite to paralyze the sphincter either by stretching or by incision before a cure can be effected; the higher the ulcer the more amenable it is to treatment.

Lymph infection proceeding from the rectum involves the pelvic and lumbar lymph glands, especially those lying in front of the sacrum; if from the anal canal the upper and inner inguinal are involved. Should infection spread by the vascular system, the liver is the seat of secondary trouble. Emboli from the external hem. veins have been known to cause death by a general systemic infection. Subcutaneous or submucous infection involving the anal canal may open into the canal (incomplete int. fistula), or upon the cutaneous surface just without the margin of the anus (incomplete ext. fistula, or in both directions (complete fistula). It may begin with ulceration in the canal (usually Tb.) and extend into the ischio-rectal fossæ, or it may begin as an ischio-rect. abscess and cause either kind of fistula.

Abscess is very frequent in this region because: First, the proximity of the rectum and its contents causing its frequent ulceration. Second, the poorly vascularized fat and loose connective tissue in the fossæ. Third, the effect of gravity inducing congestion. Fourth, the absence of muscles to facilitate the return of venous blood. Fifth, the slight but oft-repeated trauma, caused by the impact on the roof of the fossæ by the intestine during coughing or straining. Sixth, exposure of the fossæ to repeated external trauma and change of temperature.

The points for the spontaneous opening of an abscess are due to the boundaries of the fossæ. Thus we see it between the levator ani and the ext. sphincter into the anal canal. Just ext. to the ext. sphincter in the space between the tuberosity of the ischium, the gluteus maximus, post. margin of the deep perineal fascia, and the ext. sphincter ani. All such abscesses should be opened early for the following reasons: First, to prevent suffering, caused by pressure on the twigs of the small sciatic fourth sacral, inf. hem. and perineal nerves. Second, to avoid fistula. Third, to avoid pelvic cellulitis by extension upward. They should be opened widely to give good drainage, as the parts can be perfectly approximated. The incision should radiate from the anus to avoid severance of nerves and blood vessels and to prevent the formation of troublesome scars. In the presence of fistula both openings should be united by incision, which will usually sever the ext. sphincter. Incontinence will not prevail for any length of time because of the action of the int. sphincter and the pubo-coccygeus portion of the lev. ani. In women a free ant. incision of the ext. sph. may result in incontinence, the lax condition, on account of the interposition of the vagina, preventing the firm attachment of the ant. fibres of the pubo-coccygeus.

Cancer of the rectum may involve any portion, but is apt to be found within the lower two or three inches. In addition to the symptoms of obstruction, the pain from contact with feces and traces of blood, there are other symptoms due to

the anatomical surroundings. Pressure on the sacral plexus may suggest sciatica, lumbago, sacro-iliac disease, or coxalgia. Pressure on bladder or prostate may cause distressing vesical symptoms and in the female menstrual disorders. Laterally it may involve the ischio-rectal fossa and cause abscess or intractable fistula. If the extension is by the lymphatics or blood vessels the same structure will be involved secondarily, as are involved by spreading infection in these channels.

The relation of the peritoneum to the rectum, leaving the entire posterior wall bare, allows the removal of carcinomatous growths without the involvement of the peritoneal cavity. Approach to the growth depends on its location. It may be reached from in front through the vagina, from above through the peritoneal cavity, from behind by removal of the coccyx. If there is extensive involvement it may be reached by removal of the sacro-sciatic lig. and the left half of the sacrum, up to the level of the third sacral foramina. It should be remembered, however, paralysis of the bladder may follow injury to the third sacral nerve.

Dr. Bidwell's paper was as follows:

Colotomy means an artificial anus or opening into the colon. Colotis, the older term for the procedure; colostomy, the newer and more correct one, has superseded the first in favor among medical men. Both the words have been long in use describing the same procedure, and are practically accepted in every-day work as synonyms, though Petit, the originator of the newer term, designed that colotomy be limited in describing the temporary and colostomy the permanent usage has nearly made us forget any etymological difference.

The procedure is an old one first performed by the inguinal route by Pillore in 1776, for obstruction from cancer of the rectum, and the lumbar by Callisen in 1796. Since that time the technique, indications and prognosis have had a checkered career. In its early history without anesthesia or asepsis, it was a formidable piece of surgery with a fairly high mortality—between 12 and 25%—and only used as a last resort. Though answering its purpose admirably in the face of the obstacles that day could but offer. Today by the harvest of past experiences, the aid of all the varied helps of modern surgery, it has become a very common procedure, offering not only to our patients, but aiding the surgeon to perfect results in a better, quicker, easier manner than ever before, and having a mortality rate of 2 or 3%, showing the improvement in its technique and safety to our patients, which is an item not always to be entirely forgotten.

So long have these two terms been used interchangeably, that in speaking more definitely of any one procedure we use the words temporary or permanent as it may be. Temporary colostomy is used in cases which are curable by treatment or surgery, and in which later the natural channel can be established. Permanent colostomy is used where no hope can be entertained for use of the natural channels whose function have been destroyed by disease or by surgery, we are com-

pelled to remove a diseased portion, making it impossible to re-establish the natural outlet.

The indications at first were very few. Today its uses are many and varied. Then it was only done to relieve the patient from agony in complete obstruction. Today we are very quick to suggest it. Temporary colostomy is now being employed frequently in various inflammatory conditions of the colon, rectum and sigmoid. By this procedure we can deflect the fecal current, allowing us to more directly and accurately apply our treatment to lesions, before treated in a tentative manner hoping and awaiting results.

In complicated fistula between the intestinal and urinary tracts, stricture of the sigmoid flexure, strictures of the rectum previous to dilation or resection, as a preliminary procedure to extirpation of the rectum for imperforate anus, hoping later to restore what nature has forgotten and as an urgent and life-saving procedure in certain cases of acute obstruction, accompanied with great distension.

Its being advised in rectal ulceration to keep a clean field while we treat the lesion proves the little risk the patient assumes.

The permanent colostomy is indicated in cases assuming a far more unhappy prognosis. The most frequent being malignancy of the rectum; then performed either to stop the flow of irritating discharges over diseased parts, to relieve distension, or to give the patient an opening for the intestinal contents and to free him from suffering as long as he is compelled to survive after he is crippled by this condition.

The operation from the localities in which the artificial anus is placed is lumbar or abdominal. The lumbar region in an early day was a much favored one, as it permitted the operation without the operator trespassing upon the peritoneum, and exposing the patient to infection. Their low mortality proved their good judgment.

The objectionable features to this location are: A difficult place for a patient to care for himself, thus suffering from irritation of the skin, from fecal discharges, it is difficult to apply dressings, the possibility of injury to kidney or ureter, especially if abnormally placed, it is difficult to properly perform, while avoiding the peritoneum, and lastly it is very difficult to close the artificial opening. These have made it unpopular.

In the history and technique of this operation we find the names of Callisen, Amussat, Hawse and Bryant closely connected. To Bryant must be given a great deal of credit for his work on the procedure, he having had a very large experience with good results. His technique was as follows: Placing the patient on the side opposite the site of operation, making the point of incision prominent by a sand bag underneath, using the quadratus lumborum as a guide, make the incision about five inches long just below the border of the last rib, $1\frac{1}{2}$ inches behind the ant. sup. spine of the illium, parallel to the crest of the one. Incise skin and fascia, separate the muscle fibres, incise the transversalis fascia and you enter the fat bed of the kidney, carefully separate the fat, remembering abnormalities of kidney and ureter, and look for colon at lower border of kid-

ney near spine. Entering the peritoneum depends on the length of the mesentery. The colon, if the mesentery will permit is dragged to the surface, packed around by pads of gauze, if distended with gas relieve by a trocar; supported by ligature of silk, or a rod or forceps under it, incise longitudinally, remove the contents by irrigation; suture the edges of wound in colon to the edges of the skin wound; skin is covered with vaseline and dressed.

The abdominal route is simpler, there is less danger of infection owing to the shallow location of the colon, permitting better opportunity for exploration into the cavity. It is much easier to re-establish the natural channels, for this reason it is the favorite site chosen. Care and accurate diagnosis are required in locating the site of the incision, the location of the temporary anus is important, for example, not obtaining any gas or discharge would assure us we were below our obstruction, and our opening be of no benefit. For treatment it must be near enough to reach the lesion, yet be in healthy tissue. As a preliminary operation before removal of a stricture or a tumor, it must be far enough away not to interfere with a later operation; that is, its location may not soil the wound to be made, and will leave enough healthy tissue between it and the lesion to permit the operator using the same if needs be resecting a part of colon to establish the normal condition.

The site being chosen the abdomen is opened as in celiotomy, the opening being large enough for an exploration with the entire hand, the advantages are clearly seen. The gut is drawn out taut above and loose below; a rod of glass or metal passed under the colon through the mesentery, two or three sutures connecting the two legs below the rod. If the intestine must be opened at once it must be sutured to the skin now, but if able to wait two or three days it need not be done, but cover with a copious dressing and open when desired.

If it should be known the opening is to be only temporary, incision is made longitudinally; if permanent, it is made transversely, or a V section may be made; suturing the new anus to the skin, closing the lower extremity by suture after cleansing, permitting it to drop back into the cavity.

Williams County Medical Society held its fourth bi-monthly meeting for 1910, at Bryan in the Probate Court Room, Thursday afternoon, July 14, 1910. The program was as follows (beginning at 1 p. m.): General subject, "Tuberculosis." "What It is and How We Can Get It," D. G. Mortland, Edgerton. Diagnosis, H. M. Byall, Montpelier. Hygiene—Climate, Exercise, Clothing, L. A. Beard, Pioneer. General discussion. An evening session was held at the Opera House at which Dr. Daniels of Toledo gave an address with lantern demonstration. The public was cordially invited and urged to attend this session.

SIXTH DISTRICT

A. J. MARCH, M. D., Collaborator.

The Portage County Medical Society held their second annual outing at Brady's Lake Hotel, Thursday, July 14, at 4 p. m. This meeting was followed by dinner at the hotel for the physicians and their ladies. Covers were laid for thirty. The program consisted of: Paper, "Prostatic Hypertrophy," by R. H. McKay, Akron; paper, "Border Lines of Medical Ethics," by J. H. Seiler, Akron; address, "Suppressions of a Post-Graduate Medical School," by W. B. Andrews of Kent.

EIGHTH DISTRICT

J. R. McDOWELL, M. D., Collaborator.

The following program was presented at the last meeting of the Muskingum County Medical Society, at Zanesville, on July 13: 1. "Some Observations on Obstetrics," W. C. Bateman. 2. "Part of Our Therapeutic Armamentarium," Simeon Kelly. 3. Report of a case of Cæsarian section, by W. A. Melick. Several unsuccessful attempts had been made to deliver the woman with forceps after she had been in labor for two days. The section was finally performed at the farm house, her condition being such that it was impossible to get her to a hospital. The child was dead, but the mother is doing nicely. 4. Report of a case of placenta previa, by C. H. Higgins, in which there was no hemorrhage until labor had begun. 5. Dr. McDowell, as a member of the Public Education Committee, reported that places for lectures had been secured on the programs of all the women's clubs in Zanesville, for the next year, also a lecture before the teachers' institute, one before a large Sunday school convention, and the probability of several before the schools of the city.

NINTH DISTRICT

S. P. FETTER, M. D., Collaborator.

Hempstead Academy of Medicine held the regular monthly meeting at Carnegie Library on Monday, July 11, at 2 p. m. The meeting was devoted to the feeding and diarrhoeal diseases of infancy. Dr. Rardin led with a lecture on "Infant Feeding," Dr. Robe followed with one on "Enterocolitis of Childhood," and Dr. Allard presented the subject of "Cholera Infantum. The three papers elicited a very interesting and timely discussion.

Dr. Allard reported having sent a floral tribute, on behalf of the physicians of Portsmouth, to the family of Dr. J. L. Gahm, who died on the 8th

inst. at his home in Jackson, but who was widely known in Southern Ohio.

Dr. Obrist presented a report of a case of angio neurotic oedema that was of interest.

The following members were in attendance: President Fitch, McKerrihan, P. J. Kline, C. F. Kline, Hutchens, Test, Wendelken, Hendrickson, Gault, Fetter, Allard, O. R. Micklethwait, Obrist, Robe, Locke, Schirrmann and Rardin.

NEWS NOTES

CHANGES IN THE PERSONNEL OF THE MEDICAL FACULTY AT THE UNIVERSITY OF PENNSYLVANIA.—The Trustees of the University of Pennsylvania have announced recently certain changes in the personnel of the teaching staff to go into effect at the beginning of the next academic session, September 1, 1910.

To fill the Chair of Theory and Practice of Medicine made vacant by the resignation of Dr. James Tyson, Dr. David L. Edsall has been transferred from the Chair of Pharmacology and Therapeutics and the vacancy in the latter will be filled by the appointment of Dr. A. N. Richards, new Professor of Pharmacology in the Medical School of the Northwestern University.

One hundred thousand dollars has been received for the endowment of a Chair of Physiological Chemistry, and Dr. Alonzo Englebert Taylor of the University of California will be its first occupant.

Dr. Richard M. Pearce of the University and Bellevue Hospital Medical College of New York has been appointed Professor of Pathology. Dr. Pearce will also direct the work of the department of Research Medicine recently established by an endowment of \$200,000.

Dr. Allen J. Smith, the present Dean of the Medical School, will be the occupant of the new Chair of Comparative Pathology and be at the head of the newly-instituted courses in Tropical Medicine.

Dr. Paul Lewis, who will have charge of the laboratory of the Phipps Institute for the Study, Prevention and Treatment of Tuberculosis, now an integral part of the University, has been elected Assistant Professor of Pathology.

AMERICAN PUBLIC HEALTH ASSOCIATION TO MEET IN MILWAUKEE.—The American Public Health Association will hold its thirty-eighth annual meeting in Milwaukee, Wisconsin, September 5 to 9 next. Representatives from many of

the national organizations working in the interest of the public health have been invited to be present and to discuss methods for the correlation of the work of such organizations, and for cooperation with a view to increasing efficiency and economy. Sanitary engineering will occupy a conspicuous place on the program.

This association is the oldest national sanitary organization in the United States. Its membership extends over the United States, the Dominion of Canada, Mexico and Cuba. Information concerning it can be obtained by addressing Dr. Wm. C. Woodward, Secretary, Washington, D. C.

AUTOMOBILES AND THE BIRTH-RATE.—MR. E. T. Fairchild, who has taken the school census for the present year in Kansas, says that since the appearance of the automobile in rural circles the number of births has decreased. We doubt whether this reasoning will hold, although we do not question the coincidence. By the same token, droughts, grasshoppers and mortgages must have had a stimulating effect on the birth-rate in the Prairie State. The decreasing birth-rate and the increase of the farmer's bank account are alike caused by the growing wealth of the farmer and the changed standards of living as a result. The automobile should not be held responsible for the relative absence of babies, although it has probably served as a substitute in many cases. A. M. A. Jour.

CHANGES AT THE UNIVERSITY OF CINCINNATI.—At a meeting of the trustees of the University of Cincinnati, May 31, on the recommendation of President Dabney, a complete reorganization of the faculty of the Ohio-Miami Medical College (medical department of the University of Cincinnati) was adopted. It was found during the year just closed, the first year of the union of the Ohio and Miami colleges, that the faculty was much too large and consequently too unwieldy. The new plan provides for a clinical head and a didactic head in the more important departments, while in the smaller departments the two positions will be combined. The plan also provides for a salaried dean. The chiefs of the fundamental chairs of anatomy, physiology, pathology and chemistry will be on salary and will devote their entire time to the work. Dr. Paul G. Woolley, formerly of the University of Nebraska College of Medicine, is now the professor of pathology with Dr. William B. Wherry as assistant professor of bacteriology; Dr. Martin H. Fischer, of the Dakland (Cal.) College of Medicine and Surgery, has been secured as professor of physiology.

A full-time professor in anatomy is still to be secured. Dr. Charles E. Howard has been appointed receiving physician to the Cincinnati Hospital, vice Dr. Robert D. Mussey, resigned. Dr. Rufus B. Hall has been appointed gynecologist to the Cincinnati Hospital, vice Dr. Charles L. Bonifield, resigned.

A party of the members of the American Society of Clinical Surgery are making a tour of the principal surgical clinics of England. They include Samuel Alexander, Kansas City; Willard Bartlett, St. Louis; Arthur D. Bevan, Frank Billings, M. L. Harris, J. B. Murphy and L. L. MacArthur, Chicago; Joseph A. Blake, George E. Brewer, Ellsworth Eliot, L. W. Hotchkiss and George Woolsey, New York; Ernest A. Codman, F. B. Lund, J. C. Munro and C. A. Porter, Boston; Gwilym G. Davis, C. H. Frazier, J. H. Gibbon, J. T. Hutchinson, Edward Martin, R. H. Harte and R. G. Le Conte, Philadelphia; John M. T. Finney and Harvey Cushing, Baltimore; Charles H. Mayo, Rochester, and Emmet Rixford, San Francisco. The tour in London includes visits to the following hospitals: St. Thomas's, King's, Middlesex, Guy's, St. Bartholomew's, London Temperance, National Hospital for Epilepsy. Mr. Makins, Sir Watson Cheyne, Mr. Bland Sutton, Mr. Arbuthnot Lane, Mr. Lockwood, Mr. H. Patterson and Sir Victor Horsley are doing the honors at the respective clinics. The Frimley Sanatorium for Consumptives and the Museum of the Royal College of Surgeons will also be inspected. From London the party will go to Edinburgh where they will visit the Royal Hospital Infirmary and the Hospital for Sick Children and be received by Mr. Alexis Thomson and Mr. Harold Stiles. Thence they will proceed to Newcastle and Leeds to visit the clinics of Mr. Rutherford Morison and Mr. Moynihan, and finally to Liverpool to the clinic of Mr. Robert Jones.

NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS.—At the twentieth annual meeting of this confederation held in St. Louis, June 6, the following officers and committees were elected: President, Dr. J. C. Guernsey, Philadelphia; vice-presidents, Drs. James A. Egan, Springfield, Ill., and Charles A. Tuttle, New Haven, Conn.; secretary-treasurer, Dr. George H. Matson, Columbus, Ohio; assistant secretary, Dr. Darlington Snyder, Columbus, Ohio; executive council, Drs. N. R. Coleman, Columbus, Ohio; Edwin B. Harvey, Boston; James A. Duncan, Toledo, Ohio; A. H. Hamel, St. Louis; D. P. Maddux, Chester, Pa.; committee on clinical in-

struction, Drs. Henry Beates, Philadelphia; Chas. A. Tuttle, New Haven, Conn.; Fred C. Zapffe, Chicago; Maurice J. Lewi, New York; L. F. Bennett, Beloit, Wis.; committee on materia medica, Drs. M. G. Motter, Washington, D. C.; J. C. Guernsey, Philadelphia; Geo. MacDonald, Washington, D. C.; committee on lay publicity, Drs. Darlington Snyder, Columbus, Ohio; Frederic Singer, Pueblo, Colo.; Fred C. Zapffe, Chicago.

PUBLIC HEALTH BULLETIN.—The Board of Health of Columbus has begun publication and distribution of a bulletin to educate the public in sanitary and hygienic matters, following the plan of other cities.

SYSTEMATIC WAR ON WHITE PLAGUE.—The board of health of Cleveland has formally endorsed a bond issue of \$250,000 for a tuberculosis hospital. District dispensaries will also be opened, following the plan which has been successful in Boston.

THE ALBERT MEDAL AWARDED TO MME. CURIE.—The British Royal Society of Arts has just given its highest award, the Albert medal, to Mme. Curie. The former recipients were Lord Kelvin, Pasteur, Edison, Lord Lister, Lord Rayleigh and Sir Andrew Noble.

MARRIAGES

Charles J. Wehr, to Miss Lena Hitzelberger, both of Bellevue; June 18.

John H. Thompson, to Miss Mabel Ayers, both of Green Spring; June 22.

Noel G. Mussey, of Glendale, to Miss Penelope Lever, of Loveland, June 16.

Julius B. Evans, to Miss Mary Evans, of Ada; June 20.

Charles F. Daniels, Tiffin, to Miss Olga M. Hierholzer, of Lima, June 14.

Dr. Anna M. Hill and Mr. William Shinnick, both of Zanesville, were married at Syracuse, N. Y. on June 15.

DEATHS

O. F. Edwards, Eclectic Medical Institute, Cincinnati, 1864, died at his home in New Lebanon July 8, from cardiac disease; aged 74.

W. D. Cole, Eclectic Medical Institute, Cincinnati, 1879; died at his home in Anasonia July 8, from apoplexy; aged 63.

B. P. Good, Medical College of Ohio, 1858; died at Cincinnati April 23, from apoplexy; aged 77.

A. C. Wilton, University of Wooster, 1882; died at Youngstown June 16; aged 61.

L. N. Pontius, Rush Medical College, 1881, died at Gallipolis June 20; aged 56.

O. A. Lion, Cleveland Homeopathic College, 1881, died at his home in Akron from injuries received in automobile accident June 17; aged 55.

W. W. Snyder, Sarling, 1901, was found dead at his home in London June 26; aged 34.

R. J. Walker, Columbus Medical College, 1884; a resident of Toledo, died while on a vacation, July 7, from apoplexy; aged 48.

J. L. Gahm, Medical College of Ohio, 1887; a practitioner of Jackson, died from an aneurism of the aorta July 6; aged 54.

Philip Dickeş, Bellevue Medical College, 1886; died at his home in Greenville July 7 from cancer; aged 57.

A. A. Hessell, College of Physicians and Surgeons, Chicago, 1891; died at his home in Put-in-Bay July 7 from heart disease; aged 42.

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ORIGINAL ARTICLES

THE OPERATIVE TREATMENT OF STERILITY IN THE MALE, WITH REPORT OF SIX CASES.

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[Read before the Ohio State Medical Association.]

The subject of sterility, whether in male or female, is of such importance both to the state and family, that it seems to me one well worthy the attentive consideration of such a scientific body as the one I have the honor to address to-day.

Until the last few years whenever a man would present himself to a physician complaining of a fruitless marriage the wife would be subjected to examination and possibly some morbid condition would be found to which would be attributed the entire cause and she alone looked upon as physically incompetent.

The male members of the union were sadly neglected by the medical profession until the operative treatment reported by Martin of Philadelphia, gave an impetus to the more careful consideration of the male as a possible factor of childless marriages. In one of the cases I will report the woman was subjected to nearly all forms of gynecological procedure before the possibility of sterility in the husband was considered.

It has usually been the rule if a man was well developed sexually, was able to copulate in a normal manner and had what seemed normal ejaculations of semen he was not considered sterile, and failure to have offspring was always attributed to some abnormal condition in the woman. In every case that I have seen the patients have considered it very unlikely that they were at fault and every one of them were rather

active sexually and had apparently normal ejaculations of semen.

With the advance in genito-urinary surgery, the condition of the semen and seminal tracts has been carefully studied with the result of proving that in unfruitful marriages the husband is the sterile member of the family in about one case in six. Some authorities give a much higher percentage, namely, Noeggerath, who found eight sterile marriages in a series of fourteen, to be the fault of the male. Gross, in 192 cases found the male deficient in 18 per cent. According to Kehrer the cause of childless marriage is now sought more often on the side of man than was heretofore the custom. Kehrer gives his results, in a series of 96 cases of sterility, in 3.12 per cent there existed inability to copulate; in these cases there had been a preceding history of excessive masturbation. The men suffered from frequent pollutions or their ejaculations were premature and the penis could not be inserted in the vagina.

In 21.31 per cent a-zoospermia existed. In practically all of these cases there was a history of gonorrhea with unilateral or more often bilateral epididymitis. A-zoospermia was also found where no disease of the sexual organs had occurred and where nothing abnormal in the genital organs could be demonstrated. Dr. Cunningham, of Boston, has had three such cases. The paucity of spermatozoa (oligo-spermia) was demonstrated in 11.45 per cent. Here there was a history of gonorrhea with epididymitis or syphilis. It is more than likely that a large per cent of cases of oligospermia is due to chronic prostatitis and seminal vesiculitis. I have seen quite a number of these cases where the spermatozoa were ill formed and non-motile. It will be seen from this series of 93 cases that 63 per cent of the sterile cases had a history of gonorrhea with infection of the epididymis and prostate.

Sterility in the male is due first to aspermia. In this condition there is no secretion of semen. Second, to azoospermia where the semen does not contain spermatozoa. Third, to oligospermia

where the spermatozoa are few in number, motionless, or their movements transient. Fourth, anatomical abnormalities that prevent the passage of semen through the urethra, and the escape of the semen outside the normal channel, as in the case of hypospadias and fistula, and fifth, to the presence of stricture of the urethra preventing the escape of semen from the meatus.

Men with double undescended testicles are almost invariably sterile; so too, is this the case in those whose testicles have received serious injuries causing destruction of the secreting structures, or occlusion of the efferent ducts. This latter is a condition which obtains in epididymitis, the inflammatory exudate and the presence of abscesses in the epididymis, by their failure to be absorbed and the consequent formation of scar tissue causes an occlusion of the efferent ducts of the epididymis. The presence of abscess formation in acute gonorrheal epididymitis is much more common than is generally supposed, as in 48 cases that I have operated upon, abscesses were demonstrated in 80 per cent.

Whether sterility is more common in the cases that have abscesses I am not able to state, but the presumption is that it would be. As I have stated in a previous paper on this subject the mouths of the ejaculatory ducts may be occluded as a result of operation for stricture, stone, or prostatic conditions. In the cases of absence of spermatozoa the ejaculated fluid may contain all the physical properties of normal semen as regards smell, consistency and appearance.

When we have small calibered strictures the fluid is either forced back into the urethra or retained in the urethra behind the seat of constriction until the erection subsides when it slowly leaks out.

A few cases have been reported where none of the reasons cited would hold, but these have been explained by the belief that the semen was perverted in quality or deficient in quantity through constitutional depression or cachexia. Here the microscope would disclose a state of azoospermia or oligospermia with the few spermatozoa showing but feeble motion or else complete absence of motion. And after no course of treatment other than that for the cachexia we would eventually find the presence of the procreative bodies and soon hear of an impregnation. Then, too, we are forced to consider the theory of apparent lack of affinity of the one cell for the other; we see this demonstrated in cases of a childless first marriage being followed on both sides by marriages resulting in a large family for each member of the former union. We hear of the so-called physiological and psychological ques-

tion with which the stock breeders have to contend at times, and which forces them to set aside a prized stallion of known abilities for one of inferior pedigree.

Next to gonorrheal infections, frequent masturbation and sexual excesses are the most frequent cause of sterility in the male. The prolonged and frequent overstimulation of the secreting structure of the testicles finally results in exhaustion of the organ, the spermatozoa being imperfectly formed, even though the quantity and quality of the fluid may be apparently normal. The virility of the spermatozoa is often in direct proportion to the general physical condition of the patient. The oft-repeated shocks to the nervous system, which occur especially in masturbators, who take advantage of the time, and place, which are always convenient for their purpose, lowers the general physical condition, producing constitutional depressions and cachexia, and thus affecting the virility of the spermatozoa. I have seen several of these cases perfectly cured by leading a hygienic sexual life.

In bilateral syphilitic and tuberculous disease, a considerable portion are sterile on account of the destruction of the epididymis in tuberculosis, and the destruction of the testicle itself in syphilis. Another cause existing in the modern age is the X-ray. Workers in X-ray laboratories and physicians doing this work are the ones affected. One prolonged exposure has been known to cause sterility lasting three months. At first the spermatozoa are dead, and later disappear altogether. I know of seven workers in an X-ray laboratory in New York who have been sterile for over two years. I do not believe that any permanent cases have been reported from this cause. The consensus of opinion among men doing X-ray work as far as I can learn is that recovery will take place if the worker discontinues the cause. One worker of my acquaintance was sterile for some months, but after keeping out of the rays for three months this defect disappeared and his wife became pregnant. When inflammation has attacked the greater portion of the prostate, so as to block up the ejaculatory ducts, after an orgasm there may be two or three viscid drops escape that contain principally pus cells and degenerated prostatic cells, but no spermatozoa. In other cases there may be so much pus present in the prostatic and vesicular secretions as to cause the death of the spermatozoa when they come into contact with the element of the fluid. The diagnosis of this condition should be made on microscopical examination by finding pus and dead spermatozoa in the fluid obtained by massage of the prostate and seminal vesicles.

I have seen several cases where the spermatozoa were non-motile that were cured by treatment of the prostatic condition, and in one case so much pus was present that part of the prostate was excised (care being taken not to injure the ejaculatory ducts); the pus disappeared and the spermatozoa regained their motility.

As I have heretofore mentioned, the principal cause of sterility in men is bilateral gonorrheal epididymitis. Benzler, in the "Archives of Dermatology and Syphilis," in 1908, in looking up the history of old soldiers who had gonorrhea while in the German army, found that among those who had been married three or more years 10.5 per cent who had suffered from gonorrhea without epididymitis were childless; these were probably the cases with chronic prostatitis and seminal vesiculitis; 24.4 per cent of those having bilateral epididymitis, were childless. It will be seen from all statistics that epididymitis is by far the most common cause of sterility, and it is most common in the cases where both sides were involved, almost 50 per cent being sterile. Mr. Martin believes that sterility following double epididymitis is not as common as these statistics would show, in fact he gives a much smaller per cent than any other observer. Statistics show that traumatic epididymitis, unless very severe, rarely leads to sterility. Orchitis probably never occurs in gonorrheal infections. I say this from results in forty-eight cases that I have operated upon, with acute epididymitis of the severe type, in none of which was the testicle itself involved.

In gonorrheal epididymitis it is well known that the globus minor is the portion of the epididymis most involved, and it is in this very portion that occlusion has the most dangerous results, as there is here but one efferent duct, while in the globus major the efferent ducts are numerous, and the obstruction of one or two would still leave open other channels. It was because of the known patulency of the globus major following gonorrheal epididymitis, when the globus minor and vas deferens in this region became occluded, that the operation of anastomosis of the vas deferens and the globus major was considered. The prognosis for the return of spermatozoa in these cases, unless operated upon, is positively hopeless.

Dr. Quinby of Boston has done some experimental work on guinea pigs. He tied off the vas deferens at its exit from the globus minor, and then made an anastomosis between the globus major and the vas above the ligation, in the method recommended by Dr. Martin of Philadelphia (which is described later). Instead of

using fine silver wire, very fine silk was employed.

In from ten to twenty-seven days three out of the four pigs thus operated upon showed spermatozoa in the fluid ejaculated by means of electrical stimulation. In dogs, spermatozoa reappear in from six to eight days.

The operation is performed as follows: An incision is made through the skin and coverings of the epididymis, which is approached from the outer side so as not to wound the spermatic artery. The artery of the vas is pushed aside and a one-half inch incision is made in the vas deferens on the level with the globus major, along its axis, care being taken to get into the lumen of the tube. A portion of the globus major is picked up between two fine forceps and an elliptical piece removed to correspond with the incision in the vas deferens. An examination of the fluid obtained by squeezing the globus major should show motile spermatozoa. Four sutures on curved intestinal needles are inserted, one at the upper angle of the wound joining the vas and the cut surface of the epididymis, one at the lower angle, one at the outer, and one at the inner side. When these are approximated a perfect little pocket is formed by the spreading out of the cut vas deferens, and the elliptically cut globus major. The wound is then closed and dressed. It will be seen that the operation is not dangerous. It is one in which the existing condition cannot be made worse, but where, in fact, everything is to be gained and nothing to be lost. The first case was one referred to me by Dr. Wall. The patient was a robust appearing man of thirty-eight, who had been married several years. His wife had been examined and no cause for sterility ascertained. He had had gonorrhea with double epididymitis some years before. Frequent examinations of the spermatic fluid showed no spermatozoa, but the fluid obtained was loaded with pus. The prostate and seminal vesicles had been the seat of chronic inflammation. Treatments caused a practically complete disappearance of pus. The patient was operated upon by Dr. Martin of Philadelphia, and the examinations after operation revealed live spermatozoa. This patient's wife has since given birth to a child. Dr. Martin has operated fifteen cases; six cures and three pregnancies resulted. Dr. Martin at first recommended a lateral anastomosis between the vas deferens and the globus major. All my cases have been operated on by this method.

At the meeting of the American Association of the Genito Urinary Surgeons in 1907 he stated

that he believed it better to cut the vas obliquely and sew this wide stretched lumen thus made to the globus major.

It is very important to be sure that there is no occlusion in the vas deferens above the seat of operation; this can be readily done by the Bel-field operation, which consists in slitting the vas and injecting fluid into its cavity. If a colored fluid such as argyrol is injected and the vas is patulous it will appear immediately in the posterior urethra and if it does not appear a gentle massage of the vesicle of that side should cause its appearance and it may be readily demonstrated by the passage of a catheter.

In making a diagnosis it is important to exclude the possibility of exhaustion of the testicle from too frequent intercourse. I would suggest careful and repeated examinations of the semen to determine the presence or absence of spermatozoa.

The operation is a minor operation. It cannot compromise the function of an organ that has already proven functionless. The only chance for recovery of patients suffering from sterility due to obstruction of the epididymis is operative.

Case 1: Age: 36. Social condition: Married. Date of first visit: January, 1906. Date of gonorrhea: 1897 and 1900. Time between onset of gonorrhea and appearance of epididymitis: Five weeks after second attack. Potency: Normal. Examination of testicle and epididymis before operation: Testicle normal, thickening of globus minor on both sides. Date sterility was determined: November, 1905. Results of examination of semen: Repeated examinations negative for spermatozoa. Date of operation, Garfield Hospital: February, 1906. Time of appearance of spermatozoa after operation: Seven weeks. Actively motile spermatozoa in globus major: Present. Result: Cured. Remarks: Father of child 2½ years old.

Case 2: Age: 29. Social condition: Married. Date of first visit: February, 1906. Date of gonorrhea: January, 1903. Time between onset of gonorrhea and appearance of epididymitis: Bilateral, three weeks. Potency: Normal. Examination of testicle and epididymis before operation: Testicle normal; globus minor indurated on both sides. Date sterility was determined: February, 1906, first visit. Results of examination of semen: Numerous examinations during ten weeks were negative. Date of operation, Garfield Hospital: May, 1906. Time of appearance of spermatozoa after operation: One month. Actively motile spermatozoa in globus major: Present. Result: Cured. Remarks: Father of child three years old.

Case 3: Age: 35. Social condition: Single. Date of first visit: June, 1907. Date of gonorrhea: 1903. Time between onset of gonorrhea and appearance of epididymitis: Bilateral, four weeks. Potency: Normal. Examination of testicle and epididymis before operation: Testicle normal; globus minor thickened on both sides. Date sterility was determined: June, 1907. Results of examination of semen: Numerous examinations during three weeks were negative. Date of operation, Garfield Hospital: July, 1907. Time of appearance of spermatozoa after operation: Six weeks. Actively motile spermatozoa in globus major: Present. Result: Cured. Remarks: Patient lost sight of.

Case 4: Age: 29. Social condition: Married. Date of first visit: June 14, 1909. Date of gonorrhea: 1898. Time between onset of gonorrhea and appearance of epididymitis: Bilateral, right, four weeks; left, five weeks. Potency: Normal. Examination of testicle and epididymis before operation: Testicle normal; globus minor indurated

on both sides. Date sterility was determined: March, 1909. Results of examination of semen: Numerous examinations by Dr. Sprigg negative for spermatozoa; few pus cells. Date of operation, Garfield Hospital: June 14, 1909. Time of appearance of spermatozoa after operation: Two months. Actively motile spermatozoa in globus major: Present. Result: Cured. Remarks: No child.

Case 5: Age: 32. Social condition: Married. Date of first visit: July 21, 1909. Date of gonorrhea: 1894. Time between onset of gonorrhea and appearance of epididymitis: Bilateral, three weeks. Potency: Normal. Examination of testicle and epididymis before operation: Right testicle normal; epididymis indurated at base; left testicle atrophied, mumps. Date sterility was determined: About March, 1907. Results of examination of semen: No spermatozoa; few pus cells; amyloid bodies. Date of operation, Garfield Hospital: July 22, 1909. Time of appearance of spermatozoa after operation: None six months after operation. Actively motile spermatozoa in globus major: None. Result: Unimproved. Remarks: Hopeless.

Case 6: Age: 27. Social condition: Married. Date of first visit: May, 1909. Date of gonorrhea: 1904. Time between onset of gonorrhea and appearance of epididymitis: Bilateral, about four or five weeks. Potency: Normal. Examination of testicle and epididymis before operation: Testicle normal; epididymis thickened in body and globus minor. Date sterility was determined: 1906. Results of examination of semen: Negative for spermatozoa. Date of operation, Garfield Hospital: May 8, 1909. Time of appearance of spermatozoa after operation: None after nine months. Actively motile spermatozoa in globus major: Few slightly motile. Result: Unimproved. Remarks: To be operated again.

MEETINGS TO BE HELD IN SEPTEMBER.

A number of national and state societies are to hold annual meetings next month. Among them are the following:

Amer. Acad. of Ophthalm. and Oto-Laryn., Cincinnati, Sept. 19-21.

Amer. Assn. of Obstetricians and Gynecol., Syracuse, Sept. 20-22.

American Public Health Association, Milwaukee, Sept. 5-9.

Amer. Roentgen Ray Association, Detroit, Sept. 28-Oct. 1.

Kentucky State Medical Association, Lexington, Sept. 28-29.

Medical Society of Missouri Valley, Council Bluffs, Iowa, Sept. 1-2.

Michigan State Medical Society, Bay City, Sept. 28-29.

Mississippi Valley Medical Association, Detroit, Sept. 13-15.

Oregon State Medical Association, Portland, Sept. 7-9.

Wyoming State Medical Society, Casper, Sept. 27.

A neuralgic pain in the region of the ear should suggest a careful examination of the teeth for caries or alveolar inflammation.—Surgical Suggestions.

The possible development of a duodenal ulcer in case of extensive burns must always be borne in mind.—S. S.

Do not operate for foreign body in the knee joint without first excluding dislocation of one of the semilunar cartilages.—S. S.

THE CLINICAL SIGNIFICANCE OF NON-DIABETIC ACIDOSIS.

LOUIS A. LEVISON, M. D.
Toledo.

[Read before the Ohio State Medical Association.]

Despite an already voluminous literature, it still remains true that non-diabetic acidosis is generally not looked for or recognized. Explanation of the general neglect of this important disturbance of metabolism may be sought in the fact that it has not long been attracting the attention of many observers, or in the fact that the origin and precise nature of acidosis is not definitely settled. There is a much to be regretted confusion in the nomenclature of this subject. The terms, acidity of the blood, urinary acidity, acid intoxication, acidosis, subacidosis, are used with variable significance and meaning. A more definite use of these terms is much to be desired.

The reaction of the blood plasma is normally very near that of distilled water, lying just to the alkaline side of the neutral point. This nearly neutral reaction is maintained by the body with the greatest tenacity, as the animal cells are not able to carry on their various functions in a distinctly acid or alkaline medium, owing to the chemical affinity or tendency to combine between the proteins of the protoplasm and alkalis or acids. This neutral point is being constantly changed and as constantly kept intact. Carbonic acid is being constantly produced in various metabolic functions and would soon render the tissues acid to a poisonous degree, were not this counteracted by ammonia formations and the presence of organic bases. On the other hand, an excessive alkalinity is neutralized by carbonic acids, or the phosphates, carbonates, and proteins which usually hold the balance of power, as they possess the adaptability of acting either as acids or as alkalis.

The reaction of the blood depends on its ionization, a preponderance of free hydroxyl (OH) ion or hydrogen (H) ions determining its nature. Owing to the intolerance of animal cells for concentration in either hydroxyl or hydrogen ionization, the pendulum never swings very far from neutrality, at least normally. Acids or alkalis in the animal economy are irritants in small amounts and as such are speedily excreted by stomach, intestines, or kidneys, but in large amounts the organism succumbs. It is on this account that experimentation with changed reaction of the blood is difficult or even impossible.

The determination of the blood reaction has never been an easy nor an accurate procedure. The reasons lay in the nature of the blood, its color its composite character, the varying number of morphological elements, the protein content capable of acting either as weak acids or bases the contained carbonates and phosphates which can act likewise, and the indicators necessary, of which the list is long, but unsatisfactory.

The reaction has been uniformly given as alkaline and expressed in terms of sodium hydrate, varying from 150 mg. to 300 mg. for every 100 c. c. of blood. The early method of Landois was too complicated and its modification by Von Jaksch, who uses a watch glass containing sodium sulphate and tartaric acid solutions, is but little better. Löwy introduced a method in 1894, in which blood is laked with ammonium oxalate, titrated with $n/25$ tartaric acid solution, using as an indicator a lacmoid paper prepared from resorcin and sodium nitrite. Engel modified Löwy's method in 1898 so that a smaller amount of blood would suffice and devised an alkalimeter for the purpose. Dare, using his own special hemoalkalimeter, described in 1903 has spectroscopic method, in which blood is titrated with a dilute tartaric acid solution unto neutralization, at which point the oxyhemoglobin spectrum disappears. Adler described a method in 1907, based on the behavior of rosolic acid to blood serum. Rosolic acid is orange-yellow in the presence of acids, pink in neutral and red in alkaline solutions. According to the recent, careful study of indicators by Edward Salm, rosolic acid and neutral red are two indicators which respond to the slight changes in blood ionization, a change too slight for color reactions from the usual indicator. Adler soaks ash-free filter paper in an alcoholic solution of rosolic acid and then determines the color change in the presence of blood serum. This method determines the reaction only, not the quantitative amount. As a matter of fact there is no uniform standard of determination of the reaction as this may consist either of an estimation of the amount of acid or base present or an estimation of the preponderance or intensity of acidity or alkalinity as opposed to the neutral point.

In a recent article entitled "A Clinical Method of Hemalkalimetry," Benjamin Moore and Frederick Wilson attempt to solve the problem by a new and unique method. They do not estimate the amount of acids or bases in the blood plasma, nor do they estimate the hydrogen and hydroxyl ionization—the latter a truly difficult procedure. Disregarding the small degree of blood alkalinity, they estimate the ability of the

blood proteins and the inorganic phosphates and carbonates to combine with acids or alkalies by means of titration, using phenolphthalein as an indicator. This in reality is a method of determining the ability of the blood to retain its almost neutral point by means of its proteins, phosphates, and carbonates, rather than a determination of the amount of acid or base present.

The source of the acid compounds has given rise to an immense amount of work, which has not sufficed to reach a definite conclusion. The relationship between beta-oxybutyric acid, diacetic acid and acetone has been determined. It has often been shown that beta-oxybutyric acid can be oxidized into diacetic acid and acetone, either in chemical experiments or by administering the former to diabetic dogs, or healthy or diabetic human beings. The appearance of these three compounds is in reverse relation to their disappearance when the disease increases in severity. The contention of many of the older investigators that acetone was derived directly from the carbohydrates in diabetes was practically abandoned when the observation was made, which has since become commonplace, that the removal of carbohydrates from the diet in severe cases of diabetes usually produces a prompt and marked appearance or increase of acetone bodies in the urine.

There is no doubt at the present time of the important relation between the acetone bodies and fats. Abundant proof is forthcoming that the acetone bodies can be produced from fats in many ways. Cotton oxidized fats and obtained acetone. Schreiber obtained them from butter by chemical means and numerous investigators have obtained them from man and other animals by feeding an excess of butter, olive oil and other fatty foods.

It is not necessarily true that the degree of acidosis can be determined by ammonia estimations. This holds perhaps, in the greater number of cases of diabetes. If it were true that the sole function of the urinary ammonia was to neutralize the acids, the administration of alkalies should cause the urinary ammonia to disappear or diminish. The relationship is not at all constant, either in diabetes or other conditions with acidosis. Ammonia may be present in unusual amounts with acidosis even absent.

Numerous attempts have been made to trace a direct connection between acidosis and the toxæmia occurring in many conditions. That is, given a certain condition, whether diabetes or a gastric carcinoma in which acidosis is present, the toxæmia has been ascribed to the acetone bodies. That this was not the case, has been the

opinion of many observers. Forty or fifty years ago, acetone was a well recognized therapeutic agent, especially in pulmonary tuberculosis. Careful observers like Kussmaul did not note intoxication in man, even after prolonged and continuous administration. The administration of acetone to men or animals has an effect similar to alcohol but to a greater degree. The factors which show the inconsistency in the direct relationship between acidosis and the many conditions showing it are the absence of acidosis in marked intoxications and the presence of it in excess in the absence of intoxications. The acetone bodies are renal irritants and one of the more or less constant accompaniments of animal or human experimentation has been the appearance of albuminuria and casts on the continued ingestion or injection of the acetone bodies. This condition, however, is not peculiar to these organic acids as the same observation has been made in experimentation with mineral acids as hydrochloric or sulphuric acid. This is the explanation of the more or less spectacular Kulz' shower of casts. It is not rare to observe in severe diabetic urine that a great number of casts, both granular and hyaline, will precede and initiate a diabetic acidosis. This shower of casts is due to the irritation of the kidneys by a sudden increase of the acetone bodies in the urine or to a culmination of a long continued irritation.

The number of non-diabetic conditions in which acidosis has been found is exceedingly great and this is understood when we consider the general application in all these conditions of the factors, producing acidosis. All the following conditions show disturbances in nutrition. The use of the body fat in metabolism requires a coincident katabolism or carbohydrates and failing this, acidosis results.

Acidosis has been observed in acute and chronic starvation, whether the abstinence of professional fasters, the actual inability to procure foods, as by imprisoned miners, or the enforced withholding of food in gastric ulcer. Stenosis of the oesophagus, cardia, and pylorus are not uncommon causes. The disturbances in nutrition following hysterical vomiting results in a not uncommon acidosis. Pregnancy is a common cause either with pernicious vomiting, eclampsia or acute yellow atrophy of the liver. Cyclic vomiting in children, anaesthesia, digestive disturbances with vomiting and diarrhoea in adults, epilepsy, uraemia, lead poisoning, cancer, psychoses, typhoid fever, scarlet fever, measles, drug poisoning, as phosphorus, arsenic, phloridzin, or morphine are other causes.

The acidosis of pregnancy is of special significance. Acidosis is not an infrequent condition during pregnancy, more particularly during the puerperium. One of the most distinctive features of the acidosis of pregnancy is its inconstancy, its lack of harmony with an excessive ammonia excretion, and the unusual percentage of amido-acids, suggesting marked hepatic changes. In the light of what we know now about the acetone bodies as renal irritants, it may be asked, what is the relation of this acidosis to the albuminuria of pregnancy. There seems to be no reasonable doubt that a continuous irritation of the kidneys with the acetone bodies can produce a genuine nephritis. Whatever the relation between the albuminuria of pregnancy and eclampsia, there is daily proof of the co-existence of the two. The acetone bodies should be looked for much more carefully and generally during pregnancy than is now the case and their presence indicates an earnest effort to combat by all the means now at our command this toxemia of pregnancy.

Acidosis is also present in certain forms of cyclic vomiting in children. The periodical vomiting of childhood cannot be ascribed to one cause alone. It may be purely hysterical or due to errors of diet. That form in which acidosis is present occurs, too, more often in neurotic children, but is not relieved by correcting of any possible error of diet or intestinal elimination. Acetone may be detected in the vomitus, urine or breath. Indicanuria may be present and has been ascribed an important role in the affection. The indican may be excessive in amount just prior to the attack, to diminish or disappear during the attack. This has led to the belief in the close association of indol with the attacks. The inability of the organism to excrete these toxic products results in some disturbance of metabolism, associated with vomiting.

Acidosis after anaesthesia has been of particular interest to surgeons, a number of deaths have been reported after anaesthesia in diabetes, and as the production of the acetone bodies was markedly increased by the anaesthetic, this was held to be the cause. Another factor has been suggested, namely, the absence of food immediately prior and after the operation. It is not believed, however, that this is the essential factor. Reports of death from delayed chloroform poisoning have been frequent in late years, all of them associated with acidosis, but they have shown differences which preclude any consideration of all of them as one type. Here again, it has been believed that the acetone bodies were not the fatal intoxicating principle, but that they

were produced in the course of the distributed body metabolism. Extensive changes, especially fatty degeneration of the liver, have been described and doubtless have much to do with the condition.

The acidosis associated with gastro-intestinal conditions includes a number of widely different conditions the coma dyspepticum of Litten, the hysterical vomiting of adults, the intoxication from excessive fat diet in infants, and gastro-intestinal carcinomata. The terminal coma of cancer patients, especially those at the cardia or pylorus with stenosis, presents acidosis in nearly every case if the patient has been much under nourished. It has been noted, however, that if this same type of case be well fed, acidosis does not result.

The points which I desire to emphasize in concluding this subject are, first, the fallibility of the belief that the acetone bodies themselves are the toxic principles in the so-called acidosis; secondly, that the underlying cause is a profound but variable disturbance in metabolism, especially having to do with body fats with which in some unknown way, the carbohydrate consumption is closely related; thirdly, the error of considering ammonia as an index of the severity of the process or a compensatory process; and, lastly, the limited value of a therapeutics based only on an attempt to combat the acidosis with a neutralization by means of alkalies.

I desire to acknowledge my indebtedness to Ewing's masterly work on acidosis, from which I have freely drawn.

DISCUSSION.

Dr. Dunham: I saw an interesting case last year in which the condition was illustrated; a pregnant woman who had some disturbance, the albumin had been gone over frequently, and thorough test with glucose was made and found she had a glycosuria and the glycosuria disappeared after parturition. We are apt to look only for albumin and casts, and never for the other things in pregnant women.

Dr. Levison (closing): It is the practice commonly indulged in, to put the patient suddenly on a non-carbo-hydrate diet on discovering sugar in the urine. Many have been driven to the grave because the withdrawal of carbohydrates has re- one should never withdraw suddenly the carb- sulted in a fatal acidosis. Given a case of diabetes, hydrates from the diet, because it is a dangerous procedure and only to be undertaken with great deliberation. When one wishes to reduce the sugar and starchy food, it should be done gradually.

SOME OBSERVATIONS ON CAR NAUSEA.

W. MC. L. AYRES.
Cincinnati.

[Read before the Ohio State Medical Association.]

Considering the not infrequent occurrence of car sickness or car nausea as observed by the oculist and possibly more often by the family physicians, it is noteworthy that so little has been written about it and the relation between it and the eyes. By car nausea I refer to a condition affecting certain people who, when traveling on the railroads or traction cars, experience a feeling of discomfort which varies in intensity in different individuals from a mild sense of sickness or uncomfortableness to all the sensations of nausea with or without its results. There are cases who are sometimes so unpleasantly affected on the street cars, that they are compelled to seek the rear platform or accept the other alternative and get off the car, and it unquestionably is a factor in keeping certain people who could enjoy it from traveling, just as the fear of sea sickness deprives many of the pleasures of an ocean trip. One case which I saw was especially marked in this respect, and stated sometimes when coming into the city on the traction cars felt compelled to get off and wait a few moments in the open air and then take another car, only to repeat this three or four times during a trip of ten miles. Another case, that of a woman of thirty-seven, stating that in three years she had not ventured on the street cars once as she was always nauseated and that if it were necessary for her to come into the city she preferred to walk rather than experience the sensations on the traction cars. Associated with this class are those who are only exceptionally sick on the cars but always nauseated on elevators, preferring to walk up and down each time. The history of another case is not an uncommon experience, for years the patient had always traveled at night and retired immediately to avoid the nausea caused by seeing objects passing the windows and was in distress if compelled to travel by daytime. Strange and contradictory anomalies are shown when we study this subject, for example, why should one patient declare she has never been sick on the train, but always on the street cars or another asserts with equal conviction that she could travel all day on the street cars without a trace of discomfort, but was soon made sick on the train? The nervous element is undoubtedly a big factor in these cases, and it is interesting to note

that of the cases I report three times as many occurred in women as in men. It is also to be noted that this symptom was not a constant one in many cases, some saying that they had been car sick only for a few months or possibly years and then recalled that at some time previous they had had similar attacks lasting over a period. These corresponded probably to a period of overwork, prolonged worry or a sub-normal condition of the general health, this would indicate it seems to the writer an indisputable evidence of astigmatic accommodation, which during these times of let down had relaxed and given rise to the sequence of symptoms. There were a few cases also who after wearing the lenses three or four months could dispense with them, using them only occasionally thereafter, but as a general rule once this class of patients got relief from their symptoms by the glasses, they wore them most faithfully. In age practically every case was limited to the period of active accommodation and varied from a few years to fifty, most of them being between fifteen and thirty-five or a period where the eyes are used more in work and travel. To many the passing trolley or telegraph poles seem to be the cause of the annoyance, but those ascribing their trouble to the eyes were a very small minority, most of them blaming the bad air in the cars, though not becoming nauseated by the bad air in theaters or other crowded places and there can be no question but that the bad ventilation in our overheated cars helps to induce these symptoms especially if the ocular reflexes are disturbed. Some believe they have stomach trouble and others that they suffer from various nervous diseases. In the case of children too young to know that bogie, stomach trouble, or not old enough to revel in the state of being nervous, it is termed by the parents a weakness of the stomach. As stated above it is only occasionally those so afflicted realize for themselves that the eyes must have something to do with their troubles, for they notice that if they kept them closed or looked steadily at the floor, the symptoms did not occur and so came to the oculist. For the most part, however, this result was reached only by a process of elimination and by elimination I mean the excluding of nearly every organ we possess, for the physician being consulted an attack is first made against the stomach, which is toned up, washed out and drugged to the point of intolerance; the bowels are next purged for their alleged sins, the liver scoured with chologogues, in fact everything comes in for its share of drugging and the symptoms persist. There are many cases which never reach the oculist,

but accept it as their lot to always be car sick when traveling and others traveling only for the most urgent cause. One patient passed forty-five years, stated that she had suffered from train and car sickness all her life and could hardly believe that it was the glasses which had only recently given her relief. In looking over the cases of the past four years, I found that seventy-five patients gave car sickness as a symptom or sometimes as a chief complaint, and while it was associated in most cases with headaches, asthenopia and stomach trouble, yet it was given prominence by the patient. Stomach trouble was by far the most frequent accompaniment. Before working out the statistics, I had formed the decided impression that the majority of the cases would show astigmatism contrary to rule, either simple or compound, and that the proportion was greater in hyperopic than myopic astigmatism. Out of the seventy-five cases, thirty had plus astigmatism contrary to rule and thirty-one had plus astigmatism with the rule. But a glance at the relative proportions of cases with and against the rule shows that such an opinion is certainly justified, for while there were over nine hundred cases of hyperopic astigmatism (simple and compound), there were only fifty-eight cases contrary to rule, or fifty-one per cent. of the cases with astigmatism against the rule had car nausea while only three per cent. of those having astigmatism with the rule complained of it. In myopic astigmatism, both simple and compound, the proportion is decidedly less, and in the few cases of minus astigmatism contrary to rule, only one-fourth of them complained of car sickness, or just one-half as many as found in plus astigmatism contrary to rule. Car sickness was found in every case associated with astigmatism with or without some other forms of ametropia, it was found in mixed astigmatism and it is to be noted also that fifty-five per cent. of those unusual cases which had astigmatism with the rule in one eye and against in the other complained of it. On the muscle balance in the cases under consideration can not be laid the blame, for it varied from the normal balance found in most of the eyes to different degrees of both esophoria and exophoria. The adjustment of correct lenses cured the nausea in many cases completely and as one patient said, magically. Other cases reported nearly complete cure, with only occasionally a feeling of nausea on the train, and in every case benefit was derived from the lenses, for not only did the train sickness disappear but with it in most cases the vertigo, the headaches, the asthenopia and better still, the stomach trouble, and many were the cases who when

asked a year or so after the examination about the car sickness, said "I don't have it any more," and about the stomach trouble, "Oh, that's all gone, too."

DISCUSSION.

Dr. Van Note: I have enjoyed the paper very much for two reasons, one of which is that it is so excellent a paper, and the other that I have never before heard a paper presented on this subject. It is a wonder it has not been, because we have so many patients who complain of that trouble.

I feel sure, as the doctor's paper stated, that in most cases there would be found an error of refraction and astigmatism.

I want to mention one or two cases due to something else. There was one case I refracted very carefully and expected to find some trouble of that kind. The patient always complained of sickness on the steam cars and not on the trolley cars—always when she began to smell the smoke—so that case I thought must be reflex from the noise.

Some cases I think are due to a disturbance of the sense of equilibrium.

I have only been home from a West Indian cruise since Friday, so I have only been able to speak to a few people about this matter.

One person told me that whenever the cars stopped or started, if she was standing in the aisle, it always brought on car sickness. That patient I just refracted yesterday and found astigmatism. I do not know what the result is going to be of correcting the astigmatism. I have noticed it in children, and it seems that the people I have spoken to about this have had trouble in childhood. It must be an inherited tendency in my opinion.

Dr. Stevenson: Years ago I claimed in a paper that nausea could be due to refractive errors. This statement was then received with considerable doubt, although at present it is very generally conceded. It is a common experience to have patients who have broken their lenses insist on their early repair to relieve among other symptoms their nausea and car sickness. Looking out of the car window or at any rapidly moving objects necessitates such frequent fixation of the eyes as to greatly fatigue the eye muscles which have such an intimate connection with the auditory labyrinth. While ametropia undoubtedly causes this symptom I feel certain that the affect of muscular imbalance must also be considered. Moderate amounts of exophoria or esophoria and even small degrees of uncorrected hyperphoria can cause this symptom. If any person will wear a vertical prism before his proper correction he is likely soon to experience, in addition to other distress, a certain degree of car sickness if looking at rapidly moving objects.

Dr. Grosvenor: The identification of car nausea with spasmodic cyclophoria seems to impress me as a very possible cause for car sickness. The change of perspective will produce spasmodic cyclophoria, and it seems the most plausible reason for car sickness. I have in mind a woman, a mother, and several children who cannot ride on street cars, seldom ever do ride

on street or interurban cars, or for that matter, in a carriage, without getting very sick, and with symptoms identical to spasmodic cyclophoria. This matter of cyclophoria I have been looking into the last year or so with a good deal of interest, by accidentally discovering a case of spasmodic cyclophoria. When these attacks occur, I would notice an attack of vomiting, and I am inclined to the opinion that the matter of astigmatism may have something to do with it. I am more inclined to the opinion of temporary cyclophoria induced by rapid change of perspective. My observation has been that cyclophoria is a more productive cause of vomiting than all other disturbances of the extrinsic muscles, and is well worthy of more attention than has heretofore been given to it.

Dr. Standish: I would like to say a word on this very interesting subject, and to thank Dr. Ayres for his paper. The causes and symptoms of car sickness, of course are complex. All nervous phenomena that are ocular are complex.

Although greatly appreciating the paper, I would like to add my protest to the rather cavalier manner in which the muscles were excluded in these cases. I have considered it from that point of view for a good many years, and when you come to think of it, you will see that the fact that children are more often subject to car sickness than adults at the very age at which their ciliary muscle is strongest and when they are able to correct the error refraction the best, is a peculiar manifestation of this nervous phenomenon. But there are two facts that I have observed which I think will induce any one to look at it somewhat from my point of view. I have discovered that if my patient who suffers from car sickness has an exophoria, the chances are that he will escape if he rides backwards looking at receding objects, and if the person who has an esophoria and is sick when he rides backwards will ride forwards he will escape. It is not necessary that the exophoria and esophoria should be great provided that it is associated with a refractive error of considerable importance, and some of the doctor's cases were undoubtedly relieved by the correction of their refractive error, because a sufficient burden was taken off so that they could carry the muscular burden, but the sum total of the two was too great, and if you try some experiments with these people, I think you will find that if you would relieve the muscular error, they often would not have the car sickness without the correction of the refractive error.

The reason to my mind that street cars are so much more trying than steam cars in which we ride forwards is that in them we ride sideways, and between us and the objects we look at are the bars of the windows opposite producing a continued interruption of the view, and consequently interrupting our muscular fixation and making it burdensome. If any one will look into this subject from this point of view, I do not think it will be long before he will be convinced that the muscular balance, although not the whole cause by any means, is at least an important factor in this form of disturbance.

Dr. Ayres (closing): I am very glad to hear the theory of the muscles being a factor in car sickness upheld by Dr. Stevenson and Dr. Stand-

ish. I know that is a factor in producing car sickness. But in my seventy-five cases a great many had no muscular trouble. Some had a little exophoria, or esophoria, but many were practically normal. Where there was hyperopia I corrected the astigmatism at the same time with the hyperphoria and the symptoms were relieved.

"ECTOPIC GESTATION WITH REPORT OF TWO EXTREME CASES."

H. T. SUTTON, M. D.,
Zanesville, Ohio.

[Read before the Ohio State Medical Association.]

My object in presenting this paper, upon this occasion, is to emphasize the position taken by Robb and others, in favor of non-surgical interference, when the patient is in a state of collapse following rupture.

Also to urge the general practitioner to be more alert to recognize this condition before rupture occurs.

After rupture and extravasation of blood, it is easy to make a diagnosis in the great majority of cases. It seems to me that it is not difficult, as a rule, to diagnose them before rupture, if a proper and painstaking examination is made.

There ought not to be so many of these cases go to rupture. There is no excuse for it. But few women, I dare say, have suffered rupture, without having consulted a physician just previous to the occurrence.

The clinical history is seldom clear enough to justify a positive diagnosis, but the findings upon vaginal examination should be sufficient in all cases to settle the question that an operation is indicated.

You can always detect in all cases, at an early stage, an abnormal fullness in the region of the affected tube. If you operate and find that it is not an ectopic pregnancy, you will find something else that should be removed, hence no harm, but only good has been accomplished.

The great drawback heretofore has been that the general practitioner does not raise the question of alarm until most urgent symptoms have developed, and by this time life is placed in great peril.

These patients, nearly all, give a history of aggravated digestive disturbance, and other disagreeable and distressing symptoms, which have not yielded in the least to treatment extending over a period of several weeks before rupture occurs.

The chief symptoms which should create suspicion are sick stomach, irregular uterine hemor-

rhages, more or less pain in the pelvis, more marked on the side affected.

Any woman, other conditions being equal, giving a history of these symptoms having persisted over a period of two or three weeks, should by all means be subjected to a most careful vaginal examination, and if a boggy pulsating fullness is revealed, an operation should be urged at once, before going to rupture.

It seems to me that this terrible accident of rupture might be made much less frequent in the future, if the surgeons would take upon themselves to prod the general practitioners up on these cases, for there is no other class of cases so important to save as the much needed wife and mother.

Not only their lives, but their time is most precious; if possible they should be spared the long illness which frequently follows, if rupture is permitted to occur.

The symptoms of rupture are usually appalling, and consist of sudden and violent pain in the region of the pregnant tube. Faintness, collapse, and all the other symptoms of internal hemorrhage, great tenderness and rigidity over entire abdomen, together with a dull fullness above the tubes, and in pouch of Douglas, upon vaginal examination, due to the blood which has been poured into the abdominal cavity.

Martin of Berlin says tubal abortion is the rule, and that rupture occurs only in those cases in which the abdominal end of the tube is occluded, and prevents the possibility of abortion.

Statistics show that the average time of rupture is forty days after the last regular menstruation; that the average age is thirty years and nine months; that it occurs in multipara about 6 to 1; that it happens most frequently in the third or fourth pregnancy; that 75 per cent of all cases of ectopic gestation are tubal.

Gusserow's Clinic in Berlin reports 233 cases seen in nine years; 108 hematoceles resulting from extra uterine pregnancy; 73 tubal abortions; 47 tubal ruptures. Thirty-nine of the tubal ruptures were into the abdominal cavity, and eight into the broad ligament; five of the forty-seven tubal ruptures recovered without operation, thirty-one with operation, and eleven died after operation. Of the tubal abortions thirty-six recovered without operation, and thirty-seven with operation; thirty-one occurred in the first month of pregnancy; forty-two in the second month. One hundred and ninety-two of the 233 cases had irregular uterine hemorrhage.

Statistics indicate that about 5 per cent of all cases of ectopic gestation die at the time of rupture, and about 8 per cent die after operation.

Our best operators give from 40 to 50 per cent as their death rate, operating during shock.

This high mortality after immediate operation, during shock, lead such eminent men as Robb, Simpson, Stellwagen and others, to make careful observation and extensive experiments.

They report a number of striking cases, with rapid and weak pulse, in extreme shock, which recovered, and were safely and successfully operated later, after shock had been tided over. Their results have been sufficient to make us think twice, before operating a case in a state of profound collapse.

Neuganhauer had 135 cases on the deferred plan of operative treatment, with one death; Winter and Winkle a large series without a death; Thorn had 1 per cent mortality; Simpson in 100 cases had not a single death; Stellwagen, twenty cases without a death; Robb, thirty cases with one death.

Many of these cases of ectopic pregnancy are only brought to light weeks after the rupture has occurred, by an abdominal section.

The claim these men make is that operation in shock adds shock and takes away the only chance a woman has to recover; that much better results are obtained by deferring operative procedures, and stimulating these cases with the injection of saline solutions under the breasts, hot saline enemata, appropriate bandages and weights, enforcing absolute quiet.

Then, after all signs of shock have disappeared, and not before, operate.

Robb gives morphine for pain and nervousness; elevates the foot of the bed only slightly, heat externally, and strychnia in 1-10 to 1-20 grain doses hypodermatically as may be indicated.

Mrs. S., a primipara, twenty-five years of age, lived two and one-half miles from Summerfield, Ohio, and fifty-five miles from Zanesville. Her health had always been perfect, except painful menstruation from her first period up to the time of the illness which I am about to relate. Married on the twenty-fifth of December, 1908; menstruated last on the twentieth of February, 1909, but soon afterwards commenced to have morning sickness, vomiting, and felt drowsy and distressed all the time; missed her period in March; on the eleventh of April she retired feeling no worse than usual during the last two months.

She was awakened about 3 o'clock in the morning with great pain in the lower abdomen, more pronounced on the left side, together with sick stomach, vomiting and diarrhea.

Dr. E. F. McVey of Summerfield was hastily

summoned, and the pain and all other acute symptoms promptly subsided, but she continued to feel miserable, much more so than before the violent paroxysm, and kept to her bed most of the time.

On the eighteenth at noon, one week after the violent attack, she suddenly felt a deathly weakness coming on, and fainted away in a state of profound collapse.

The two Doctors McVey were hurriedly summoned from Summerfield and I was telephoned to come on the first train. I reached the house about seven hours after the attack. Found her in a state of extreme shock, pale as death, pulseless, and unable to speak, abdomen distended, tender and very rigid.

Vaginal examination revealed fullness in the cul-de-sac and the diagnosis which had been made by the Drs. McVey of tubal pregnancy with rupture was confirmed by me. The treatment heretofore mentioned was at once begun, in the hands of a competent nurse, with the result that in two weeks she dismissed her nurse and was restored to a fair state of health, with the exception of indigestion and slight distress in her left side.

This continued until October 25, six months after my visit. She was brought into the hospital by Dr. McVey for operation. She was in good state of health except as stated, and a distinct fullness could be felt in the left tubal region.

The operation revealed quite a quantity of brownish fluid in the peritoneal cavity, cobweb adhesions about the left tube and ovary.

The tube was greatly distended, with an old clot of blood as large as a walnut protruding from a tear in it. After the clot was removed a fleshy thick piece of placenta as large as a silver dollar was detached and removed, and that portion of the tube which contained it was tied off and removed.

The appendix, which was abnormally enlarged and elongated, was also removed, and the wound closed with a small drainage for safety. The patient made an uneventful recovery and left the hospital in three weeks feeling fine.

With the kind permission of Dr. Sealover of our city, I am going to report a fatal case of tubal pregnancy which occurred in his practice less than a year ago:

The woman was twenty-four years of age, lived two and one-half miles in the country, had always enjoyed robust health up to the time of her fatal illness.

This was her fourth pregnancy, the other three being normal, the last confined only six months

before her death. She had menstruated once, and had only missed one period, and manifested no other symptoms of pregnancy. She retired, feeling well, at the usual hour, and about 12 o'clock she was awakened with a terrible pain in her right side. She had eaten a hearty supper, which consisted chiefly of apple dumplings.

So she and her husband at once concluded that the pain was due to the dumplings. With the application of heat and some hot whisky, she was soon relieved of the pain, but felt uncomfortable and nervous, and walked the floor most of the time until 4 o'clock, when she suddenly became weak and faint, but no pain, and laid down on the bed again.

About 5 o'clock she attempted again to get up and fell over on the bed unconscious, and remained so until she died about 6:30.

Dr. Sealover was called about 5:30 and arrived just after she expired. The mother of the woman at once accused the husband of having had an abortion procured; and so he requested the doctor to call the coroner at once, which he did, and he and Dr. Sealover proceeded to make a post-mortem examination. They found in the abdomen about four quarts of blood and a foetus, and a ruptured right fallopian tube. A close investigation revealed that the blood had come from the ovarian artery. At least one quart of the blood was red and not coagulated. The uterus was not enlarged and the other tube and ovary appeared healthy.

DISCUSSION.

F. F. Lawrence, Columbus: Two or three points I want to make in this case. One is the question of whether we should at any time delay operation in a case of ruptured tube. It altogether depends upon the location of the rupture. If it be when the rupture is on the upper border of the tube, it is dangerous to delay operation longer than is absolutely necessary. Go after it before hemorrhage starts a second time. If you don't you will lose your patient. If the rupture is on the under surface of the tube, or if you have had a case like I had a few weeks since—she had had a rupture, but in which a previous peritonitis had resulted in matting of the small intestines down over the anterior portion of the pelvis and the uterus—the immediate dangers are not so great. In my case referred to, the patient got up in the night feeling some distress but no faintness. A physician was called that evening, and she only complained of some considerable abdominal pain. A few days later another physician was called, and finally Dr. Whitacre, who immediately recognized the condition, and she was sent to the hospital, where we found over one and one-half pints of blood, which must have come at the time of rupture. Another case that my friend, Dr. McClellan, saw a few months ago, in which the suspicion had not been entertained at all of ruptured tubal pregnancy—thought it

was a case of abortion—and yet I think there were three and one-half pints of blood in that abdomen. The patient was septic at the time. Fortunately after cleaning it out thoroughly, she got well. Another thing, in all these cases a careful examination will give you a history of tubal disease.

Now as to the question of diagnosis before rupture. One or two things I emphasized in a paper read before the Mississippi Valley Medical Society. The signs of pregnancy, some of them are much more marked than normal, the hypersensitiveness of the cervix—the breast symptoms—practically all before the ninth week. Our only safety is to teach every doctor this thing: every woman who is liable to become pregnant is liable to be affected with a tubal pregnancy, especially if given a previous history of tubal disease, any painful menstruation, hot flashes from her girlhood on. That woman is in danger of tubal pregnancy and she should be taught that if she has the least suspicion that she is pregnant, she must be examined. The tube may be movable, but it is less so than normal. We may have an inflammatory condition, but the suspicion is strong that we have a tubal pregnancy, and the danger of rupture is extremely great. Now I have had quite a large number of these cases, and I speak from experience.

Now another thing about the classical picture of ruptured tubal pregnancy, that is a myth. In one case I remember there wasn't the least suspicion of fainting, and the belly was full of blood.

W. D. Haines, Cincinnati: I am today practicing the ground taken by the essayist. I think his ground is that practically every case that is going to bleed to death primarily is going right on and do it at that time. Ordinarily, as I said a little bit ago, hemorrhage means to get a ligature around the bleeding vessel immediately. I had a case of a music teacher, who was attacked while giving a music lesson, she died thirty minutes later. Later I opened the abdomen, and it was full of blood. Another case, my assistant was called while I was in the country four or five months ago. He was morally certain that he was dealing with a case of ruptured tubal pregnancy, but the husband felt sure she was having an abortion. In four weeks she was operated and we removed an ectopic fetus, and she nearly died on the table, but eventually recovered. Another case, where recently we ran into a large mass alongside the uterus and supposed it to be a fibroid. Couldn't get a back history of any trouble at all. The doctor who referred her was sure she had the same trouble. We operated and took out a fairly well organized blood clot, extending into the culdesac and up around the round ligament. In pulling down the great omentum, just in the tip of it we found a large lithopaedion. We snipped it off and have it yet as a very beautiful specimen. Now when I got through with that case she gave me a history of tubal abortion five years previously. A doctor was examining one of these cases in the office, examining her systole, and while examining her she suddenly became faint, and he thought she was dead, but finally revived her. This was between 2 and 4 o'clock. He was

called hastily again between 6 and 7. He immediately telephoned me and we decided to operate. She was practically dying and had all the symptoms of a heavy hemorrhage. Doctor, I said, your patient is bleeding furiously, and she is dying, yet I think she will die if we don't operate. We lost about fifteen minutes' time listening to stories; the fellow was a great story teller. When we went upstairs she was breathing more freely, her pulse was better, and she was better. I waited about thirty minutes, and she got better and better. Four days later we operated on her and she made a perfect recovery.

I might further say that all of our work has been the interval work after the bleeding is over, and I am inclined to think that if these cases are going to bleed to death you cannot operate on them; they will die anyhow during the hemorrhage.

B. R. McClellan, Xenia: I think this is an exceedingly interesting and important subject. If the dogma goes out from this meeting that the thing to do is to wait days before the shock is over it seems to me that there is going to be loss of life. I do think we ought to wait until there is restoration of pulse, until shock symptoms are over, but I cannot for the life of me see the safety of leaving the patient out in the country and going home, even if you have a nurse there. I don't believe we can tell when these cases are going to stop bleeding; it may be a small leak, but you don't know when it is going to be a large leak, and it does seem to me that there is more than an even chance in favor of operation as long as the patient's condition will admit of it. I for my part will cling to that belief and act upon it until I am convinced otherwise.

J. E. Sylvester: I feel extremely diffident in attempting to say anything on this subject, but a case that I had probably two years or so ago has been a problem to me ever since. A woman had gone three, four or five weeks along, and in the forenoon she had symptoms of pain in the pelvis and some shock, but she got better, and that evening she went down to a church, where a meeting was in progress, characterized by a great deal of religious fervor, with shouting. She hadn't been there but a little bit, when she took sick. She got up to go home, and on her way she met her husband and staggered into his arms. She was carried into the home of a neighbor nearby. I found her in a condition of extreme shock. She was so extremely bad that I couldn't get away, and I got another doctor to look after with me. We gave her some morphia hypodermically and some adrenalin. She showed some signs of rallying, and I concluded after a while to stay all night, and stepped into another room to lie down. Between 10 and 11 o'clock, three hours after the onset of the symptoms, I heard a little confusion in the other room. I sprang up and went in and saw her breathing her last. I might add that we opened the abdomen later and found a perfectly formed little fetus in the abdomen. There was a small hole such as the end of a slate pencil would make, and the fetus was outside the little cord, running into that hole, and she bled to death from that hole

in the tube. Now the question with me has been ever since whether I ought not to have washed the abdomen off with a little turpentine, used a little cocaine, made an incision and controlled that hemorrhage in the abdomen. Now the question of anæsthetic has not been touched upon, but if I am caught again in that condition I will use cocaine and open the abdomen.

H. T. Sutton (closing): Dr. Lawrence said the operation would depend upon which portion of the tube was ruptured. I don't know how we are going to find out before the exploration is made. He spoke of removing the other tube. In my early experience fifteen or sixteen years ago the first cases I operated upon, I operated a number of cases before rupture, and in each case the opposite tube appeared to my untrained eye to be in a pathological condition, but these were young women, and I thought I had better give them a chance with that tube, and none of them have had any trouble. I should not think of removing the tube unless I found positive evidence of a pathological condition. I have operated these cases from the very beginning of conception to as long as eleven months' pregnancy. I operated a case that I reported at the State Society meeting in Canton two or three years ago, with a distinct history of having been pregnant eleven months and at the time I operated the rupture had occurred and the abdomen was flooded with amniotic fluid, etc. And while the child was delivered alive, the child and mother both succumbed a few hours afterwards. I don't believe these occasional cases, such as Dr. Sylvester reported, would offset a statement I was going to make in connection with the second case I reported today. I believe if this second case had come immediately under the direction of a competent physician, had been given an anodyne, that there would have been a good chance for her to survive. But she was nervous and restless, and persisted in walking around until she dropped over dead. This specimen was presented to our society the same night it occurred. I am very much taken with Robb's position in this matter, and I think on the whole he is absolutely correct, and yet I have never lost but this one case. I have operated these cases and taken out a whole bucketful of blood clots, months afterwards, women have been brought in forty or fifty miles months after this hemorrhage occurred, and they all recovered. This eleven months' pregnancy is the only case I lost, and I believe on the whole it is unwise today to operate in profound shock. The first case I reported they expected me to operate as soon as I arrived and every arrangement was made for operation. I said I couldn't touch her unless she died. And I wouldn't stimulate her much. I said to the doctor, "Inject pure water, but don't give her stimulants of any kind." When a certain amount of blood is lost, and the blood pressure goes down, in most of those cases the blood will clot. A little morphine to quiet the nervous system, and I believe that is the case to pursue.

Chronic leg ulcers may often heal quickly under the Unna zinc oxide gelatin dressing, when all other efforts have failed.—S. S.

CLINICAL OBSERVATIONS ON BLOOD COAGULABILITY AND CALCIUM THERAPY IN EPILEPSY.

MARY L. AUSTIN, M. D.
Gallipolis.

[Read before the Ohio State Medical Association.]

Notwithstanding the fact that much time has been devoted to the study of the phenomena of coagulation of both pathological and normal blood, the subject is still far from being perfectly understood. New devices and new methods for experimental work are accumulating, which will tend to establish a flawless uniform technique so that certain clinical findings observed in investigated cases may be confirmed and utilized by others making research along the same line. Until this is accomplished each worker's findings are a law only to his own work. To this extent at present the work is haphazard, and if some individual demonstrates to a certainty a causal relation between certain clinical phenomena, a deficient calcium content of the blood and an underlying pathological condition, it is due only to his own initiative and persistence. For some few years at intervals the idea has been advanced that the cause of epilepsy and some other convulsive diseases is a perverted calcium metabolism, resulting in an insufficiency of calcium salts in the organism. Notable work along this line was done as early as 1901 when Sabbatani noted that the local application of calcium chloride directly to the cortical surface of the brain of animals almost immediately reduced the irritability evidenced by nervous twitchings. Prior to 1907 this was confirmed by Sylvestri and other Italians. At this time attention was directed to the examination of the blood of 45 epileptics, 37 of whom showed a less than normal coagulating power. The assumption followed that the delayed formation of fibrin ferment (an organic compound of calcium) was sequential to a lack of lime salts in the tissues and that this was an important factor in the convulsions of epilepsy, eclampsia and tetany. Sylvestri claims that calcium salts have a rejuvenating and preserving effect on nerve tissue, especially the brain cortex. He also observes that experimentally calcium increases the digestive power of pancreatic juice, and concludes that the perverted functioning of the liver is responsible for the epileptic condition, the lime being thrown off in the urine instead of being transformed and stored in the liver and dis-

pensed from it as needed to maintain perfect nourishment of nerve tissue.

The recent work of McCallum of Johns Hopkins, is forcibly suggestive. He assigns the cause of some cases of tetany and tetanoid conditions to be a deficiency of calcium salts in the tissues, due to a perverted functioning of the parathyroid glands. He has produced experimental tetany in animals by extirpation of the para-thyroid glands and relieved the condition by a subcutaneous injection of an emulsion of parathyroids and more quickly with the calcium salts. In the case of a girl having tetany following a thyroidectomy in which the parathyroids were removed or injured, the use of calcium salts had a definitely specific effect.

In July, 1909, Dr. A. P. Ohlmacher, of Detroit, who was at that time a guest of the Ohio Hospital for Epileptics, reported the remedial effect of calcium salts in epilepsy in a case in his practice, it having been free from any form of seizure for approximately one year. This case was reported in the *Journal of the American Medical Association*, August 14, 1909. He suggested that the study of the blood be undertaken in a sufficient number of epileptics to confirm or disprove the theory of diminished coagulability, and to give a soluble calcium salt, preferably lactate, the rationale being its reputed action to increase the mineral constituent of nerve tissue.

The first obstacle encountered was the absence of a recognized time limit for the coagulation of normal blood. The apparent contradiction or at least lack of uniformity of different writers was confusing. For instance, Hinman and Sladen using Boggs' coagulometer found the clotting time to vary from three to eight minutes and averaged five minutes and six seconds; Murphy and Gould three minutes eleven seconds; Pratt four to five minutes; Robertson two minutes thirty seconds to two minutes forty-five seconds. My own records for normal blood with a Boggs' coagulometer show an average of five minutes fifty-one seconds, with a normal variation of from one to three minutes; by Wright's method one minute thirty seconds. The average coagulation time of epileptic blood was five minutes three seconds. This latter statement does not confirm that of Italian writers whose findings indicate a diminished coagulability. C. P. Emmerson of Johns Hopkins states more than nine minutes means delayed coagulation. These inconsistencies make the meaning of my former statement more evident, that until a method shall be developed or a device perfected for measuring the calcium content of the blood, that will give more nearly uniform experimental results, the

development of the subject depends on independent research.

The four methods in vogue at present for estimating the calcium content of the blood all depend on the phenomena of coagulation under the conditions of the chosen method.

Wright's method consists of a series of capillary tubes, into two or more of which a definite quantity of blood is drawn from recently incised tissue. At intervals a small portion is blown out on blotting paper until the clot fails to move in the tube, the measurement of the time to begin with the appearance of the blood at incision. This method is faulty as so much of the blood is in contact with a foreign substance, a factor favoring rapid clotting.

Solis-Cohen's stender dish method is not reliable on account of the number of times it must be handled to maintain a body temperature and to have it in a position to recognize the end reaction.

A third method is mixing a definite quantity of blood with an equal quantity of different dilutions of ammonium oxalate. At the end of one hour the dilution just preventing coagulation indicates the calcium content in terms of ammonium oxalate.

The apparatus most used by the writer is Boggs' modification of Russell and Brodie's coagulometer. It consists of a shallow metal tube into the lumen of which is suspended an inverted truncated glass cone, on the truncate surface of which is the freshly collected drop of blood. The apparatus is placed under low-power lens of a microscope. At intervals a stream of air is injected through a capillary tube in the apparatus in such a position that the air impinges tangentially on the blood. When the air no longer disturbs the relative position of the corpuscles the end reaction is reached. This theoretically approaches perfection but will not give uniform results due partially to the following factors:

The massaging of an ear or constricting of a finger to produce a quickly forming drop causes a congestion, stasis, and a change in the carbon dioxide content of the blood.

A deep incision produces a more quickly forming and available drop than a superficial puncture.

The first formed drop has a longer clotting time than any subsequent one from the same wound, therefore a new incision must be made for each record.

Pressure about an incision expresses tissue juices which hasten coagulation.

Cold, either of the apparatus or atmosphere, lengthens the coagulative process.

Contact with foreign substances favors clotting.

The time of day depending on the ingesting of fluids and food modifies coagulation.

Clotting time is diminished following venesection, averaging one minute three seconds for ten patients, removing twelve to twenty ounces per patient.

Coagulation time is lessened within one and one-quarter hour following the administration of calcium lactate. Average time, thirty seconds per ten patients.

Variation in clotting time of the blood varies in different parts of the body.

All these factors and others must be recognized and reckoned on to approach anything like uniform results even in the same individual. In my own mind, all of these methods are technically faulty, and only the quantitative estimation of the calcium content of the blood by accurate chemical methods will give reliable results.

As to the remedial effect of the calcium treatment: twenty-four patients were selected, of whom several were of the lymphatic type, and in which the different forms of seizures were represented. The average time of blood coagulation was five minutes and three seconds. In the month prior to the initiation of the calcium therapy, the twenty-four patients had 273 attacks. These with twenty-five others were given an aqueous solution X grains of Calcium Lactate per orem t. i. d. and continued to the present time. At intervals of one week for the first two months and thereafter at intervals of one month, up to the present time, coagulation records have been made of these patients. Besides many records have been made to determine whether the average coagulation of the twenty-four patients quoted above varied from that of similar groups.

The same twenty-four patients had 354 seizures during the seventh month of the treatment, the average coagulation time being reduced to four minutes seventeen seconds. There was not, however, a uniform reduction in all patients. One individual showed marked improvement; the number of attacks was gradually reduced from 89 in August to 14 in March. In the main this method of treatment is of no avail except in the occasional epileptic, as in the case cited above; and as improvements and relapses occur frequently in the ordinary epileptic existence with no other than dietary measures, we can not with certainty ascribe the improvement to the supplied calcium salt.

In status epilepticus our experience has not been encouraging. The case given most thorough trial was C. S., female, age 45. When

first seen at 2 p. m., August 20, had had 9 convulsions in forty minutes, pulse 80. Ten c. c. of a 10 per cent. calcium lactate solution was given intravenously, the pulse dropping quickly to 60. In the following seventy-two minutes, twelve convulsions occurred, when 48 c. c. of the same solution were again given by vein. No attacks followed until 1:30 a. m., August 21, when three convulsions occurred. Between 1:15 and 2:25 p. m. this same day patient had ten seizures and 75 c. c. of same solution were given as before. There was a cessation of attacks for nine hours when twelve hard convulsions occurred and the patient was given by vein 100 c. c. same strength solution. Within thirty minutes there was a sudden drop of temperature to 98.2, pulse was rapid, weak, thready, extreme pallor, slight frothing at the mouth, repeated yawning and rigors for ten minutes. External heat was applied and strychnia given, and patient's condition soon indicated improved heart action. An elevation of temperature to 103.2, pulse 130, followed, also nine severe seizures but at long intervals, in the next eight hours. With no further medication the temperature and pulse rate approached the normal, the patient had an occasional convulsion, and is now having about the same number of attacks as before the epileptic status. This treatment is too heroic, when conservative measures are as effective and lasting. In other cases of post status exhaustion we found the intravenous injection of calcium lactate as a cardiac stimulant equally ineffective. Even after this experience and failure to get remedial results with calcium salts, I am not willing to disparage their further investigation. In view of the work of McCallum in tetany, a disease which at least presents many analogies to that of epilepsy, I am optimistic that the more thorough chemical examination of the duct and ductless glands and their internal secretion will eventually solve the mystery of the cause and cure of epilepsy.

DISCUSSION.

G. T. Harding: It is pleasing to hear a paper like that of Dr. Austin's coming from the laboratory of the Ohio Hospital for Epileptics, which for several years after the rupture in the management of that institution has been in a quiescent stage, for it shows that a systematic study of the cases cared for there and of the treatment of epilepsy has again been inaugurated. I am certain that when the superintendent has been given time to expend an annual appropriation, repeatedly asked for and only granted by the last general assembly, for the study of epilepsy, we

will find the Ohio Hospital of Epileptics again taking front rank in the investigation of this disease.

I do not feel prepared to properly discuss such a paper. I have had no opportunity to make accurate experiments, and have read too little of the literature concerning the subject of calcium therapy. I have tried the use of calcium lactate in six cases since Dr. Ohlmacher's paper was published. One case, in which a favorable result was apparently obtained, was that of a colored boy, aged 15, with epilepsy of two years standing, causing one or two severe seizures a month, usually at night or on arising. After two months of hygienic care with no change he was given calcium lactate, one-half drachm daily in four doses. A seizure was reported one week later, but none thereafter. Several months later the boy reported that the medicine had kept the attacks from coming back. I obtained apparent benefit for a time in a lad of 14 years, with epilepsy of a few months duration, who was growing so very rapidly as to suggest the possibility of his needing more calcium. Later, however, I had to combine moderate doses of sodium bromide with the calcium lactate, and obtained control of the seizures. The other cases resisted all treatment.

I believe calcium lactate may be safely tried for a time in all cases of epilepsy as a means of finding those occasional cases in which its use will be beneficial. We will all appreciate the further work of the Ohio Hospital for Epileptics if it will teach us a practical way of determining which cases are in need of calcium therapy.

Dr. Gaver: I am not going to discuss the subject of the use of calcium in the treatment of epilepsy, but I want to add my approval of Dr. Austin's paper, and thank her for the excellent work. I think any one should be especially commended for presenting a report of their research of such character when it is negative as well as reporting when it is affirmative. We are to gain just as much by these reports of a negative character of work, as we are of work when anything is affirmative. So I think she is to be congratulated for pursuing her work so diligently and so well under discouraging promises, and I think we should appreciate the work especially on that account.

Dr. Pritchard: Just a word of explanation with reference to what Dr. Harding said about research work at the hospital laboratory. The legislature this winter in response to requests which had been made for a number of years has granted an appropriation of \$5000, which is to

be used, as stated in the bill, for the study of the nature and causes of epilepsy. Now I don't want you to get the idea that the work that Dr. Austin has done is a part of the work which will be done under that appropriation, because the appropriation has just become available. Dr. Austin has done this research work in the coagulability of the blood and on the use of calcium lactate along with her regular clinical duties. She has charge of some three hundred patients which she has had to look after at the same time she has been doing this work. You understand that has meant a good many hard, long hours for her. In reference to calcium lactate, there is one thing of great importance; it should not be allowed to escape into the tissues. We had one bad abscess form as the result of the calcium lactate filtering into the tissue; it caused quite an extensive abscess. So that is to be guarded against.

Dr. J. H. J. Upham: The subject of epilepsy is an exceedingly interesting one to the general practitioner and the internist, and they look to the members of this section for help and light, especially on new methods of treatment. It seems to be conceded that for the present we must consider that epilepsy is due to a number of causes, and therefore any new treatment should be considered as probably meeting only one of those causes or conditions present; so that in the use of the method mentioned by the essayist, I would protest against employing it loosely or in a haphazard manner. Calcium lactate may do a great deal of good in a certain number of cases; it may be of no avail in others. Careful study should be made of all cases where it is used and eventually it will be shown in which class of cases we may look for benefit. We cannot expect this substance to help every case, but in your observations of its actions, your tabulations, your discriminating work pro and con, you will surely be able to throw some light on this obscure subject which will redound to your credit and perhaps be of great service to a large class of sufferers.

But if, on the other hand, it is administered indiscriminately, without observing the coagulability of the blood and all of the other conditions present, you will get no substantial results and you may throw discredit on a method which may be of great value.

Dr. Austin (closing): I have nothing further to add, except the one omission that I made in my paper, and that is perhaps what came into the minds of a number of people, as to whether we had taken this test or made this record before and after an attack. Now, we cannot always tell just when people are going to have an attack, and we cannot have the microscope ready, and the few findings that we have made have been indefinite, that we cannot say whether calcium salts diminish before or after an attack.

CONGENITAL SYPHILIS IN PEDIATRIC PRACTICE.

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[Read before the Ohio State Medical Association.]

Cases of congenital syphilis are not common. Yet among the 568 patients admitted at the Babies Dispensary and Hospital of Cleveland for the year preceding October 1, 1907, sixteen were congenital syphilitics; of the 1214 new cases for 1908, fifteen, and of the 1315 new cases for 1909, nine were congenitally syphilitic; since October, 1909, five more cases have appeared, making a total of forty-five among 3440 patients.

A reference to the published report of the Dispensary shows congenital syphilis to rank with pulmonary tuberculosis in point of incidence, and nearly to equal lobar pneumonia. It exceeds gonorrheal ophthalmia in occurrence, and is far more common than erysipelas, scrofula, tuberculous and cerebro-spinal meningitis. Congenital lues is far outclassed by such constitutional diseases as infantile atrophy, rickets and the exudative diathesis, but ranks above the spasmodic diathesis, and is many times more common than chondrodystrophy and scurvy, diseases rarely seen.

In our cases, a positive history of infection in the father was secured in ten instances; manifestations occurred in the mother in six cases. In fifteen cases denying parental infection, there was a history of children with "disease like the patient," or dead children, miscarriage or illegitimacy. In only one-third of the cases was the history negative or unknown. I hold that the mother of a child with so-called congenital syphilis is herself syphilitic, and that the disease is conveyed trans-placentally. This statement is proven by result of the Wasserman serum reaction and microscopical examination of both the maternal and fetal sides of the placenta.

Of the forty-five children, twenty-three were male children, and twenty-two were female. Their ages varied from twelve days to twenty months. Nine of the children were under one month old when first seen, and twenty-eight were under three months.

In the younger infants the complaint registered on admission was most often "not gaining," and "ill since birth." In many, dyspeptic symptoms, crying, "constant cold" and skin lesions, and in the older children usually the specific manifesta-

tions themselves, caused the mothers to seek relief for their children. One-third of the children were of average weight for normal babies of the same age, and of these thirteen were breast-fed and two bottle-fed. Slightly over half the cases were under average weight, and of these twelve were breast-fed and twelve bottle-fed. One bottle-fed and five breast-fed babies were above average weight. One breast-raised child at one year registered but half the normal weight.

The manifestation earliest recognized was snuffles. This condition occurred in one-half the total number of babies at or shortly after birth. It was observed in nine more at ages after one month, and was negative or not recorded in thirteen cases. In one baby of eight weeks and another of two months the nasal obstruction had produced a pigeon-breasted chest. Nine per cent. of the babies had a hoarse cry. Dyspnea occurred in one case, due to an enlarged thymus gland.

By far the most common specific manifestations were cutaneous lesions. These occurred in all but four of the cases. Of these four, three were seen but once, the other was a case of osteochondritis and snuffles, age three months, said never to have had an eruption. Typical maculo-papular, papulo-squamous eruptions, desquamating or cracked skin, about the buttocks, thighs, hand and feet, face or trunk occurred in eighty per cent of the cases. Forty per cent showed the reddened, or raw-ham colored or desquamating palms and soles. Three cases showed reddened palms and soles as the only cutaneous involvement. Eighteen per cent of cases presented typical low moist condylomata about the anus, and in two cases butter-fly shaped condylomata were the only specific manifestations. (During the present month a case appeared, not recorded in this report, which shows a large condylomatous ulcer covering the apposed surfaces of the buttocks, the perineum, scrotum and inner surfaces of the thighs, extending to the groin; the foreskin is also dark red and infiltrated. This baby, fifteen months old, shows no other signs of disease.) In twenty per cent of cases herpes and fissures occurred about the lips, but in no case was this condition severe enough to cause appreciable scarring.

A persistent state of infiltration of the skin over the brow with dirty brownish-yellow desquamation was noted in fifteen per cent of cases, in some of which there was also a sallow, leathery condition of the face about the mouth and cheeks. Infiltration about the buttocks and genitals was often present. Edematous swelling of

the hands and feet existed in three cases, and of the penis and pubic region in one case.

Baldness of eye-brows and vertex with the "syphilitic wig" fringe of hair about the occiput was noted in fourteen cases. Three babies showed large ulcerations about the nose and upper lip. One child three months old came to us after leaving hospital, where the ulcerated bony and cartilaginous septum of the nose had been removed. The nose lay perfectly flat and was supported by an adhesive strip over the forehead. The nose has since shortened, but is still obstructed. Stomatitis occurred in seven per cent of cases.

Paronychia was seen in six and one-half per cent of cases, and in a few instances where the development of a second set of nails was seen, they were found to be narrow, elevated, yellow-colored and ridged transversely. Ulceration of the umbilicus took place in two patients.

Epiphysitis with more or less tenderness and complete or partial paralysis developed in eleven per cent of the patients and was located as follows: Upper ends of both humeri in one case, age three weeks; upper end of left humerus in two cases, aged two months and three months; upper end of right humerus in one case, age three months; lower end of right humerus in one case, age three months. This last instance occurred after one month's treatment and one month's cessation of treatment.

One atrophic baby of three and one-half months presented a typical natiform skull, in which the parietal eminences were elevated and the sagittal suture depressed, leaving a groove one by one-half cm. deep. Prominence of the frontal eminences also occurs. In a few of our cases anterior bulging with production of a transverse groove above the eye-brows has been seen to develop after some treatment followed by a month or two of absence. One of our cases has club-feet, a moderate degree of varus. One-third of the children developed rickets. Two children presented an idiotic appearance; one of these was the subject of internal squint. Enlarged and hardened testicles were found in six of the twenty-three boys. A venous dystrophy is frequently seen on the scalp of syphilitic infants, and occasionally over the chest and abdomen in atrophic subjects.

Treatment and Results of Treatment—Thirteen of the forty-five cases are known to have died. The per cent was probably higher than thirty. Strangely enough, nine of the thirteen were breast-fed; eight were atrophic. Seven died as a direct result of syphilis and six of marasmus or enteric disease in a post-syphilitic

stage. Of twenty-seven of the cases retained in our own care, twenty-one received the one-half grain hydrargyrum cum creta tablet, one three times per day. Eight patients received once a week intramuscular injections of two mg. of bichloride of mercury. Two were cured with five and eight injections; the others under injection treatment received at times the mercury and chalk tablet. Twelve patients were discharged cured or improved; four of eight still under treatment have taken the mercury and chalk intermittently for a year and one of these had a relapsing condyloma. Relapses occurred in five of the twenty-seven cases, and consisted of anal condylomata in four cases, and epiphysitis in one. Maternal breast nursing is insisted upon.

The diagnosis of congenital syphilis is to be made on the specific lesions. Splenic enlargement is of slight value. It occurs in one-half of our cases, but also occurs frequently in non-syphilitic conditions. Enlargement of lymph-glands is of no diagnostic value; palpable lymph-glands are found in all dispensary cases.

Don't pour hot oil into the ear to relieve pain. Heat can be applied much better in a hot mixture of glycerine, alcohol and water, which will not become rancid or clog up the ear, and can be removed by syringing with water. A towel or a large pad gauze wrung out in boiling water and closely applied over the ear, covered with oiled silk or rubber tissue, is better than a hot-water bottle.—Surgical Suggestions.

Nurses should be instructed not to massage the limbs of patients who complain of pain after operation or confinement, without the order of the attending surgeon. If phlebitis and thrombosis are present, the manipulation may loosen a clot and cause instant death.—S. S.

Tenderness in the heel, or pain and tenderness in the sole of the foot is very often, indeed, of gonorrheal origin. It will not be relieved in such cases until treated on that basis. The patient may deny that he ever had gonorrhea. Examine his urine; shreds tell their own story.—S. S.

Never advise an elastic stocking in cases of varicose veins where recent phlebitis exists. The pressure may detach a part or whole of the thrombus, propelling it into the general circulation.—S. S.

Patients with varicose veins should be instructed that in case hemorrhage takes place, that best method of stopping it temporarily is to merely compress the bleeding point with the finger.—S. S.

OBSTETRICS AS IT IS PRACTICED.

MARK MILLIKIN, M. D.,
Hamilton, Ohio.

[Read before the Ohio State Medical Association.]

I once asked an obstetrician of unusual skill why he did not write papers condemning the usual way of the general practitioner in conducting the average obstetric case. His answer was that he did not like to alienate that class of the profession. Perhaps he was right, for he might be able to do more good by example than by critical precept. And yet the silent, consulting obstetrician who teaches only by example, has a very limited sphere of influence in improving the obstetric art. He teaches only those whom he helps directly, and they are few.

The obstetrician's simple armamentarium tends to make him a man of peace and patience, and perhaps that is one reason why the obstetric art is unpopular. Few men enthuse over it, though many to save their faces, learn a little more of it than the average elderly females who frequent the lying-in room. The low fees, the inconvenience of the work, its "greasy domesticity," as John Morley would say, are characteristics of obstetrics in marked contrast to those of surgery. The usual doctor has an ambition to become a surgeon; he brags of his successful operation; he sees all the operations possible; he buys surgical books; he takes a post-graduate course in surgery. After all this doing and dreaming he may perform ten or twelve capital operations a year. As a busy practitioner he will have from thirty to sixty obstetric cases in that time. Probably the best that can be said for his surgical training is that it has made him a better, broader accoucheur. This should be remembered by those crack surgeons and gynecologists who periodically break into print and scold the ambitious, though less able or less fortunately situated men who aspire to surgical achievements. Most doctors like to do something worth while. Surgery appeals to them as that sort of thing. There is a certain glamor about surgical art which is also enticing. The elegant appointments, the corps of nurses, the distinguished or worshipful spectators are very different from the things and people of the average lying-in room.

Many times we have been told how to carry on the usual obstetric case. That is like viewing our art with one eye. A binocular view is obtained of obstetrics when, knowing the ideal, one is also familiar with the actual practice. It is evident

to any critic that the obstetric art, outside of a few experts, is at a low ebb. Even the laity takes a low view of it for the prospective mother's prime requisite of a successful obstetrician is guessed when at your first interview she says, "Doctor, do you give chloroform in labor?" The old women, while endorsing this, have one more, viz., that the doctor have a Kelly pad.

A confession of some of my mistakes and a narration of some of those I have seen, will, I hope, be as stimulating as a description of how to manage a case of childbirth. What happens before and after labor does not concern us now. The physicians as a rule are more alert than formerly in watching for toxæmia if they are given the chance. My theme is the actual management of labor.

How many accoucheurs are there who make a proper vaginal examination? After cleansing the hands according to their notions and dipping them into an antiseptic solution as though it were some fetish, one hand starts on a journey, coming in contact with the bed clothes, patient's thighs, anus, labia, picking up a varied flora before the fingers enter the os uteri. The examiner may justify this slovenly way by citing the well known protective properties of the vaginal secretions. He may even quote Krönig's three maxims without appreciating the last. Here they are: "No necessity for disinfection of the hand of the person conducting the case. No disinfection of the genital region. Full appreciation of the local and general predisposition for the development of infection." Such teachings are mentioned here only to be condemned. It is better to make an honest attempt to be clean and fail than to be deliberately dirty. The proper way to make a vaginal examination is to separate the labia with one surgically clean hand covered with a sterile glove, while the fingers of the other hand, similarly prepared and protected, are inserted well in the vagina. And yet I do not believe I have ever seen a vaginal examination made in this way, even though a trained nurse was in attendance to facilitate the doctor's technique. Generally speaking, the quality of hand preparation is in inverse ratio to the quantity of hand examinations. With two gloved fingers in the vagina I often sit at the bedside during the last hours of labor observing through touch the pressure on the perineum. Such a prolonged examination is no more liable to introduce infective material than a short one, and if there is anything in "helping her along," it may possibly be accomplished by making intermittent pulls on the perineum coinciding with uterine contractions.

In the middle ages the accoucheur had a sheet

tied round his neck in such a way that he could not observe the genital regions of the patient. There are still some doctors of that school who pride themselves in avoiding exposure. They are generally the kind of men who put exposure above infection. Once left in charge of another doctor's obstetric patient the physician returned just as the head was emerging. He later told me that was the first natural birth he had witnessed since graduation, some thirty years ago. At critical times in a woman's life like this, one should see the perineum if there is the least fear of it tearing. An actual view of the stretched part gives one a better idea of how much it will stand than that obtained by mere touch. Then as the head should be expelled between pains, shelled out or peeled out, with co-operation of the mother, who can do clean work under a cover?

Many obstetric sins are committed by men clad in white coats and aprons. It inspires confidence to see the doctor don his robes and wash his hands. The bystanders and assistants are, however, not critical enough to notice that afterwards he wipes his hands on any convenient towel, draws up a chair, handles the bed clothes, grovels around in his obstetric bag and makes frequent vaginal examinations. In the guise of purity he violates every surgical principle of asepsis. His sacerdotal appearance is too often the forerunner of a real priest within the next fortnight. Being a doctor, and not a mere midwife, he is supposed to help the patient along in her trial. This he does by words, as he ought to, and by deeds better left undone. I have seen a doctor put both fore fingers in the cervix and stretch as though he was divulsing the anal sphincter. That is one way to dilate the cervix, but how often is it necessary? Why meddle and inflict injury simply because anxious relatives want something done? This is a time when the little, feeble voice within us all is drowned by the primitive, unchanging plaint of childbirth. "What every woman knows" is that she can make fools of men; but what no woman knows is that an accoucheur, persuaded by her outcries, can make a fool of her and himself too.

There is a caput on the baby's head and the doctor doesn't know exactly the presentation. Figuratively speaking, there is also a caput on his own head after a long, tiresome, nerve wracking vigil. A medical friend of mine whose wretched technique is in marked contrast to his clear thought, advises under such circumstances putting the whole hand in the vagina and taking an inventory of your and your patient's errors. This is a wise thing to do, and were it practiced

oftener it would save many mistakes. If our average practitioner does this and finds the occiput posterior, what then? Perhaps he is one of those who cannot or will not use the left hand. To rotate a R. O. P. to a R. O. A. with the right hand is very difficult because the hand is being supinated while rotating the occiput forward, and power and motion are limited. If the left hand were used in this condition rotation would be accomplished during the act of pronation, and consequently much more force would be applied. Failing in diagnosing the position, or unable to rotate the occiput, the doctor decides to apply forceps.

We are all familiar with those pictures in the text books showing how the forceps should be held and how the patient should be prepared, but a pen picture of what really occurs is very, very different. The obstetric forceps is marked with the rascality of its inventors, the Chamberlains. A fallen haemostatic forceps is regarded as an outcast until purified by heat; but an obstetric forceps can stray from the pure, surgical field or never enter it at all and be received by the same man who would spurn any other contaminated instrument. It has a code of morals of its own; it is a bad actor. What a blessing it would be if these doctors with a tiny bit of sociological knowledge would as assiduously advocate sterilization of this bad instrument as they do of bad men. I have seen the forceps placed in a pitcher of hot water, the handles projecting in the air. To go through the farce of sterilizing the handles necessitates the reversing of the positions of the blades and handles. Sometimes I have seen them boiled and wrapped in a towel which has been in use. As a rule the first blade of the forceps goes on easily. Its handle is given to the grim-visaged mother or blubbing husband while the second blade is placed. After some tractions, the head not advancing as desired, the doctor takes off the blades. Probably some woman anticipating a speedy birth after the application of the forceps, has taken away the pitcher of hot water for more water, and the blades are then laid on the nearest thing—the bed, the table or a chair. Then after arranging the legs, feeling the fundus and cervix and expending some of his rapidly vanishing surplus of cheer on the assistants, he again puts on the thoroughly contaminated instrument. Now he is hot, and he pulls till the sweat runs down his belly. He feels a little pride, just a little, when he pantingly says to his anesthetist that he bets Professor X never had a tougher case. Finally, he announces that while his spirit is willing his back is giving out. He tells his young anesthetist, recently out of the hospital, to trade

places. Now this tyro, had he prepared the patient and surroundings would have followed out the technique of the hospital. He would have found in the kitchen a large bread pan and would have boiled therein forceps, fountain syringe, three or four towels, needles, haemostats and rubber gloves. The fountain syringe would have been filled with some antiseptic solution and hung on the bedpost; the towels would have been spread over the abdomen, thighs and under the buttocks. When the forceps blades were removed even temporarily, they would be laid again in the sterile pan. The patient's skin about the perineum would have been washed thoroughly and rinsed with the antiseptic solution. If feces emerged from the anus during the head's descent they would be washed off with a stream from the fountain syringe. In short, he would have made his patient and surroundings conform to some picture in his text-book of obstetrics. But when the young doctor is asked to assume a star role in such a dirty tragedy, his antiseptic instincts are paralyzed; besides, now they are useless. He at least must pull as hard as the old man, so he braces his feet against the side of the bed and puts youth's impetuosity and strength in the pull. When the perineum is stretching and the forceps handles have come dangerously near together, the voice of medical ethics speaks and the youth changes with his senior. A few more vigorous pulls and a head shaped like a potato, scarred with forceps, occiput posterior, ploughs through the perineum. The owner of this head faintly gasps and is turned over to the efforts of the young doctor. The older man is chagrined to see arterial blood pour from the vagina. There is a tear deep and long. As he believes in leaving the womb clean (for does he not say so, and does not the grandmother nod approvingly?) he plunges his hand in the uterus and gets the placenta. Then he delves deeply in his obstetric bag and gets the only suture material he has, a card of silk. There is no time for sterilization and no use of it anyhow, for while sewing the palpable tear he drags the thread through a puddle of feces and liquor amnii, which has accumulated on the rubber pad. After tying the mother's legs together as though the torn levator ani had anything to do with the movement of the thighs, he and his assistant depart damningly. They will now go to a home and give directions about boiling water, removing carpets and curtains and sterilizing sheets and towels. Later in the day they will operate in this room on some hemorrhoids. This baby will probably have cerebral disturbances. The mother will probably have sepsis. The young doctor has

had his ideas of obstetrics so shocked that they will probably never fully recover. He will lapse into a state of pessimism, believing and declaring that home practice of obstetrics can never approach in excellence that of the hospital; that the protective properties of the vagina are all sufficient; and that the Lord is good to women in childbirth. Because the older man worked hard, wore a gown (to keep his trousers clean), had a rubber pad, used an anesthetic, cleaned out the womb, charged them to keep the patient on her back and to keep out light and company, his reputation in that family will be established. The family will never realize that so much incompetency could be condensed in a few hours' work.

I have seen a veritable giant of a doctor apply forceps, brace his feet against the bed and put, no doubt, 100 to 200 pounds pull on the instrument. The patient was lifted from the bed and after a while with a rip, the head came through a completely ruptured perineum. The infant was born dead from rough usage, and in a few days the mother joined it from sepsis. The forceps are good for other things besides pulling. I know one man who jerks with them at about \$5 per jerk, and there is only one jerk at that. The *modus operandi* is as follows: About the time that the head is down on the perineum the husband and other members of the family are told that the forceps are needed. The patient is then placed across the bed and anesthetized. The husband is told to get a good grip on his wife's shoulders and the instigator of this forceps-for-revenue-only scheme gives one tremendous jerk. It is said that in one instance he ruptured the perineum, tore the umbilical cord and really had to do quite a bit of jugglery to keep the infant's heels from hitting the ceiling. A more able man would have derived revenue from patching up the perineum, but this man is one of those who doesn't believe in surgery and other reckless things, so he ties the legs together with the assurance that in a couple of weeks all will be well.

I once put on forceps for a confrere and coaxed along the head until it was on the perineum, and then removed the blades, and after a little encouragement and advice to the mother the baby's head slipped over an intact perineum. As we left the house the doctor said that he had never seen the forceps used in that manner; that he was too hot-headed to use them so, for when he got them on he always wanted to "pull like hell." The grip of the forceps is to some doctors as the pull of the collar to the draught horse, and there is an uncontrollable impulse to pull.

As though muscular obstetrics was the consummation of the art, the axis traction forceps is held up before the doctor as a badge of excellence. Famous obstetricians use them; the instrument makes one famous; therefore buy a pair and pull the harder. That is the syllogism. What is needed more is a forceps that will break or go off, or sound an alarm when pulled on to the extent of 50 pounds.

While condemning the force exerted in pulling, I call attention to the lateral force applied to the baby's head. There is no need of this. Every forceps can be made into an axis traction forceps by making traction from the joint, or even by pulling with one hand while holding loosely one handle and merely keeping the other handle in place.

Sometimes I have seen doctors hold the head by means of forceps where the last pain left it. That is certainly bad practice. It is in direct violation of nature's way and is apt to cause too sudden stretching of the perineum. From the way some men hold on the handles all the time one would suppose that the baby could get away. The importance of relaxation and actual separation of the handles between pains is impressed on the accoucheur if he is unfortunate enough to find a loop of the cord between one forceps blade and the neck, and as a consequence a dead baby. Another mistake very common is to see the head delivered with the forceps still applied. The blades take up very little room, but in primipara especially, every little counts. At the risk of being dogmatic I declare that the forceps should always be removed before the head is born unless it is applied to the after-coming head. Ostensibly a pulling instrument, the forceps is nevertheless a fine pusher. When the woman is anesthetized and incapable of comprehending warnings against straining, a pushing force on the forceps will often save the perineum by delaying the descent of the head. But when have I ever seen a doctor push with or without forceps?

It has several times happened to me that after pulling harder than I ever would again, I have turned and delivered with comparative ease. The lesson from this is that if the head fails to properly engage after the forceps is applied, it is time to think of and do something else if you expect a live baby.

On several occasions it has been my privilege to help doctors who were worn out in futile attempts at turning. I say it not boastfully, but I have never failed to get the baby that I went after, and it was simply because I realized that I couldn't whip the uterus with one hand in one

round. Insinuate the hand well lathered with antiseptic soap and when fatigue comes on rest. After the uterus has relaxed push on a little further. You will soon be able to grasp a leg or both legs with a comparatively fresh hand. It may be necessary to rest in withdrawing the legs. The general cause for failure is that the accoucheur thinks that he will push up, grab a leg and pull it down. He tries one hand in the uterus and then the other, and the outside one is always busy on an unsterilized field over the fundus. After he has done his best to get the baby and incidentally to infect the mother, he realizes that he is whipped, and calls for relief. The doctor who now takes the case in hand is handicapped before he touches the patient. He may clean up to save his conscience, but the mischief has been done and he will unjustly be a party to it. These glaring errors in antiseptic and aseptic technique make one ask if we are really ahead of our grandfathers in the obstetric art. One also wonders if the ordinary case of obstetrics is not as safe or safer in the hands of the timid midwife blessed with patience than in the hands of the hot-headed doctor who thinks he must do something, and inflicts trauma.

It is amazing to me the complacency with which some doctors manage breech presentations. I have never managed one alone, though I believe the majority of men do. Recently I had an assistant waiting for an hour and a half, while I, with two gloved fingers in the vagina, sat at the bedside feeling the state of the perineum and observing the descent of the breech till the opportune time came for that assistant's strong pressure over the pubis. It is no time for help from members of the family; they are not inclined to make themselves parties to what looks like an attempt to kill both mother and child.

It is doubtful if half the doctors of today are more aseptic and antiseptic in their technique than the doctors of two generations ago. However, they have more spasms of misapplied virtue. The doctor of whom the nurse said didn't wash his hands until he had sewed up the perineum, perhaps wouldn't hold a post mortem or look at a case of erysipelas if he had a patient having labor pains. He would probably rail at one of the greatest aids to aseptic obstetrics, the rubber glove, declaring that he couldn't tell one fontanelle from the other with his tactile sense so blunted. We may ignore his sense of touch; the problem is how to sensitize his moral sense.

It is an appalling thing to think that about once a week a busy doctor goes to a home to assist in a physiological process so poorly equipped to meet it, and hardly prepared at all

to deal with the pathological. He has no fountain syringe, antiseptic soap, rubber gloves, proper suture material, leg holders or transfusion needles; and worst of all, he has little interest in the work, believing that anybody can conduct a labor case, but that it takes a smart man to stain for tubercle bacilli or scrape the womb.

The remedy for slovenly obstetrics is to see good obstetrics. Like other arts, it is learned at the side of a teacher. The doctor who goes away for a few weeks to see a little surgery or nose and throat work ought to pay a little attention to the obstetric clinic. And you teachers, you good, patient men who will not even scold your careless confreres, you must show some righteous indignation at the low position they assign this great specialty; and you who are not didactic and clinical teachers must remember the facility with which hospital ideas of the young doctor are blighted by contact with obstetrics as it is today generally practiced. Realizing that all branches of medicine are at times poorly practiced, nevertheless it seems to me that for persistent sins of omission and commission, obstetrics takes the prize.

PATHOLOGICAL CONDITIONS OF THE NOSE, THROAT AND EAR AS ETIO- LOGIC FACTORS IN DEGENERACY.

ROYSE D. FRY, M. D.,
Cleveland.

[Read before the Ohio State Medical Association.]

Over \$2,000,000,000 is spent annually in the United States for police protection and in the apprehension, conviction and incarceration of criminals, while comparatively little is done as a result of organized effort to eliminate defectiveness in children, to improve their heredity, physical defects and environments, which are the most potent factors in furnishing the recruits for reformatories, asylums and prisons. I had hoped to gather some statistics on the result of treatment in public institutions, but find none. This shows that the medical profession have not become sufficiently interested in this class of institutional work.

Why do we have defective children? Because of parents who are diseased, weak, vicious, or blood relatives, because of bad environment, traumatic injuries at birth and in early life, or as a result of diseases in early life and as a result of malformations or diseased conditions of the organs of special sense. In what way do these mal-

formations and diseased conditions produce defectiveness and degeneracy? By interference with the normal growth, development, and function of the frontal lobes of the brain. The frontal lobes may properly be considered the center in which ideas are created, the throne on which judgment and reason sit, the location where afferent impressions, received from the external world through the special senses are synthetized and converted into ideas, judgments and motives. The frontal lobes are the voluntary coördinating centers for all sensory impressions. Taking this view of the frontal lobes, it at once makes clear that all pathologic conditions which in any way retard or interfere with their normal growth, development and function are of vital importance to the child and state in which he may become a public charge.

Normal metabolism is only possible when normal conditions exist in the part to be nourished. The anatomical relation through the arterial venous and lymphatic systems existing between the frontal lobes and the superior meatus, the frontal sinuses, the ethmoids and sphenoids and the naso-pharynx is well established. Injection of the arachnoid space also injects the lymphatics of the nose. The blood supply of the nasal cavities and accessory sinuses is derived from the sphenopalatine and descending palatine arteries, the anterior and posterior ethmoidal arteries and the arteries of the septum. These arteries with their accompanying veins form an intimate vascular connection with the frontal brain. Any long continued disturbance in the circulation of the nasal cavities and accessory sinuses in the child will produce irreparable changes in the frontal lobes. Hence, a chronic congestion or inflammation or occlusion of the nostrils cut off the air supply and drainage of the accessory sinuses, causing clogging of the blood and lymphatic systems and thus interfering with normal metabolism of the frontal lobes. The adult with a diseased or occluded superior meatus suffers from aprosexia. He has headache, is listless, morbid, possibly melancholy, may have asthma or hay fever, is irritable, can not apply himself, he is more or less incapacitated for business. Where this is from nasal origin, you restore these parts to normal condition and you restore your patient to health. So with the child who is suffering from aprosexia from similar causes, he is dull, listless, unable to concentrate his attention, one or all of the special senses are below par, he may be a mouth breather, he has a foul breath, digestion is impaired, tongue furred, he sleeps poorly, is morbid, irritable, peevish, anemic, possibly has chorea, reflex eye or ear disturbances,

is probably dull and is found fault with at school, is chastised at home, he is the butt of ridicule, is discouraged and may become a truant and as a result of bad company, a public charge. In a vast majority of cases you change all this by rational surgical and therapeutic measures applied to the nose and throat. But why this marvelous change? Because you have relieved the brain fag from straining to see and hear; you have removed obstructions of the nose and throat and treated diseased conditions which caused deficient oxygenation of the blood, you have removed the cause of a blocked lymphatic and blood supply in the frontal brain and thus restore to the individual his power to coördinate and synthesize incoming sensations, thus enabling reason and judgment again to hold sway.

Dr. Thomas D. Grasty of Washington, D. C., states that the brain weight at birth is one-eighth of the body weight, at fourteen years 1-15 to 1-25, and in the adult 1-43 of the body weight. In other words the brain attains to nearly its normal adult weight during the first fourteen years of life. During this period the brain is unstable, and trivial causes produce profound impressions, such as reflex irritations from eye strain, the intestinal tract and the genito-urinary organs; elevation of temperature, increased vascular pressure from diseases and obstructions of the nose and throat, faulty hygiene, arduous school work, deficient rest and defects of the special senses; stimulants such as tea, coffee, alcohol, tobacco; toxins from faulty teeth or impaired digestion or from various diseases. While all these sources of brain irritation and faulty metabolism should be remedied, probably none are of such vital importance as the pathologic conditions of the eye, ear, nose and throat. As a result of my interest in the subject, I called on Dr. I. T. Cronin, two years ago, who is connected with the New York public schools. He made this statement: "The physical examinations of the inmates of truant schools shows 95 per cent are suffering from physical defects sufficient to retard their progress, and that a removal of the more serious of these defects was followed by their normal development both mentally and morally." He also stated, "That in one of the truant schools of 150 pupils 80 were operated for adenoids and tonsils by Dr. Emil Mayer and his assistants the first day and 60 others on subsequent days. As a result of these operations the progress of this school during the next twelve months was marvelous."

Hoping to obtain helpful information from reformatory institutions, I wrote to eighty-four industrial schools in the different states and

received fifty-two reports, the other institutions replying that their reports were not complete. I found sixty-three adenotomies and fifty-eight tonsillotomies, twenty-five cases had been fitted with glasses; no results of treatment were noted. The report from the Agricultural and Industrial School, located at Industry, Monroe county, New York, gives evidence of thorough and intelligent medical and surgical supervision. In this institution forty-five of the total fifty-eight tonsillotomies were performed and all of the sixty-three adenotomies; also the twenty-five cases reported were here fitted with glasses. St. Charles School in Illinois reports forty-two eyes examined and many fitted with glasses, not stating the number. In one other institution some were operated on for adenoids and tonsils, the number not stated. The total number of inmates of the fifty-two institutions sending reports was 17,635, the number at the Agricultural and Industrial School of Monroe county, New York, was 643. Of these 140 had eye defects, or 21 per cent; 108 were operated on for adenoids or tonsils, or 17 per cent; 1035 teeth were filled, or 161 per cent. Assuming that these are a fair average of all of the fifty-two institutions we find that 21 per cent, or 3703, have visual defects, 140 of whom were reported treated; 17 per cent, or 2797, were in need of adenotomies and tonsillotomies, of whom 108 were operated on. Of the 17,635, 161 per cent of teeth were in need of filling, a total of 28,391; of these 1035 were reported as receiving attention.,,

While I have made a search in the libraries of the Academy of Medicine of Cleveland and New York City and the Surgeon Generals library of Washington for statistics as to the result of treatment in institutional work, I have failed to discover any.

I wish to acknowledge the courtesy shown me by Mr. Wm. Akers of Cleveland, a member of the board of directors of the Lancaster Industrial School, who invited me to be a guest of the institution to make any investigation which my time and their facilities would afford. Major Garlock, the superintendent, aided me in every way possible to facilitate these examinations, of which 499 were made on February 18 to 22 inclusive. These boys were taken from the different homes of the school so as to interfere as little as possible with the daily routine. Their ages ranged from seven to twenty-three years. The physical defects found in these boys would, without doubt, give a fair average of the percentage of defects of the entire school of over 1200. The examination of these 499 boys shows the ears normal in 212 cases, defective in 287 cases, with

history of existence of otitis media in fifty-seven cases. The nasal examinations show six normal cases; deflected septum, 335; thickened septum above in 421; thickened septum below in 156; contact or occlusion in 180 cases; rhinitis in thirty-nine cases; adenoids were present in 384 cases and absent in 115; tonsils normal in 33 cases and hypertrophied in 466 cases; teeth were normal in 103 cases, malocclusion in 343 cases, decayed teeth in 216 cases, and notched in 42 cases.

Dr. Cronin states that 95 per cent of truant children in New York have physical defects sufficiently marked to retard their progress both mentally and morally. I found, in the examination of 499 boys, not one who was normal, which would fully corroborate Dr. Cronin's statement.

The unanimity of opinion of all eye, ear, nose and throat specialists is that the correction of defects of organs of special sense in children usually results in the cure of aprosexia; also that the cause of aprosexia is due in most cases to clogging of the arterial venous and lymphatic systems of the frontal lobes from abnormal and diseased conditions existing in the nose and throat. That eye strain is frequently a contributing cause is also true. Statistics from various sources show that 95 to 100 per cent of cases of otitis media are caused from adenoids.

Our public schools and state reformatories should be the vanguard in the army of progress. The state assumes the right to compel education and insists that each child shall be vaccinated. Could she not require that each child before entering school should be examined by competent specialists and submit to such operations or other treatment necessary to correct palpable physical defects? This would save thousands of children from lifelong defectiveness and becoming wards of the state. All judges of juvenile courts and most teachers will bear witness that the vast majority of defectives and delinquents are physically defective and abnormal.

The fifty-two industrial schools from which I received reports, twenty-seven have resident physicians or physicians on monthly salaries varying from \$16 to \$60; sixteen institutions have visiting physicians who receive 40 cents per visit and some of them probably more, amount not stated. Who would doubt that these physicians earn all they receive? But who would be willing to say that these fifty-two physicians should have without extra remuneration given expert attention to 3703 visual defects or that they should have performed the 2797 adenotomies and tonsillotomies which needed attention; or that they should have operated upon the deflected septums, hypertrophied turbinates and treated the diseased noses

to the extent of 30,000 sittings? Yet all this should have been done and could have been by competent men within easy reach of these reformatories at an additional expense of \$100,000, an amount so small when divided among the different institutions that it would only increase the percapita expense less than 1.6 cents per day. If our state treasurers did not have personal use for the interest account on state funds this work could be done and a large surplus of interest left for other state institutions. The vast army of defectives, degenerates and criminals which cost the United States more annually than did the Civil War are recruited largely from children whose heredity, physical condition and environment are bad. The state should require sterilization of habitual criminals and should see to it that the physical defects of the organs of special sense in children are corrected and their environment made wholesome. This state supervision will probably only be made possible when the rank and file of the medical profession accept the proposition that pathological conditions of the organs of special sense are etiologic factors in degeneracy.

DISCUSSION.

C. S. Means: The paper by Dr. Fry has been one of great interest to me. It has been my fortune to have some of this work in hand for the last five or six years. My being a member of the board of education brought me in contact with a great number of children who were either deficient mentally or morally.

After looking into this matter carefully it was decided by the board that a school for delinquents or truants be organized. In order to get some statistics for its organization I went before the teachers and requested that they keep records of all the causes of truancy, and also make examination, according to the Allport tests, of all children who were back in their grades. The school was opened, and today is one of our best institutions.

This examination has been the means of finding a number of delinquents and also a great number of unfortunates who from either defective eyes, ears or enlarged tonsils and adenoids have been compelled to fall back in their work—many of them leaving school because of their inability to keep up with their classes.

The school for delinquents has been formed and now has two teachers. They are taught in the literary branches and also manual training. Through the kindness of Samuel L. Black, our juvenile judge, I had nearly one hundred children from the juvenile court sent to me for examination. Fully ninety per cent. of these children had some gross lesion in their eyes, ears or throats which I believe are the chief causes of their delinquency. Some of them were operated; many of them were sent to the Industrial School; others were taken away from the state, and some refused operative measures, so that the clinical history is deficient in that it was impossible to follow these cases. However, those who were operated showed

very great improvement both mentally and physically.

One boy in particular I remember. He was eleven years old and came from a very good home. His father was dead and the mother provided very well for the boy. He developed truancy when in the third grade, and was continually nagged by his teacher for being back in his work. He finally, instead of going to the school-house, would go down into the city and return home at the usual hour for school children. He soon developed into a common thief. He obtained a messenger's badge, and used this as a means to get into homes where he could steal jewelry and anything that was of value. This boy was examined and found to be absolutely deaf in one ear and blind in one eye. Had this child been taken in charge, had his adenoids removed early, and given the advantage of careful attention in school, I believe he could have been saved, and the state instead of having a common thief to deal with could have had an honored citizen.

I believe the doctor's paper has sounded the keynote when he says: "Spend more money for educating our boys, and less for building penal institutions." I am sure many boys, and girls as well, could receive an education and be morally and mentally preserved if the proper examination of our school children was enforced by the enactment of state laws making it compulsory for all children to be examined.

Dr. Fry (closing): Mr. Chairman, I have nothing especially to add. I will simply say the object of this paper was principally to call attention to the fact that there has been up to the present time no very persistent organized effort on the part of the authorities of our cities, or the country, to correct the defects in children from a physical standpoint. It has been very largely simply, as the doctor just described, a matter of incarceration, keeping them out of mischief. I think the logical method of treating these defects is the same as we treat other diseases, from the standpoint of the pathologist rather than from the results that follow their misconduct. The suggestions which I have made in this paper, which, in reading it rapidly, may have escaped your notice, are, that a thorough physical examination of the school children in all communities, especially in municipalities, is certainly possible, and if these examinations were made by men thoroughly competent it would be an important step in solving this problem. I do not want to cast any reflection on people who are doing this work now, because it is impossible for anybody who is trying to do twenty times the amount of work it is possible to do, to do it well. The fact is this work is done in most cities by men on small pay who are expected to examine a large number of children a day. It is impossible to examine the eyes, ears and noses and throats of many children in a day and give any definite idea of the actual condition. We frequently find rhinitis and have scabs or discharge that make it impossible to make an examination without cleanser. What I wanted to suggest was this: That if this examination was made before the entering of children in the public schools and made by competent people, and time enough given and remuneration enough given so that they could afford to do it, the results would be permanent records that could be transferred if the child moved to another city.

While it is a very difficult matter to get the parents of these children and the authorities in line to insist upon these operations just as it is difficult in some instances to get them vaccinated—you know those things are smoothed over and there are many children in our public schools who never have been vaccinated—if the authorities will stand rigidly for the proper operative and medical treatment in these cases it can be done. But you have to educate the parents and the authorities and get them to believe that it is the proper thing. You must create public opinion in order to bring about these results. I was perfectly amazed when I came to examine the reports of the industrial schools and saw the need of work on these lines. It does not speak very well for the pathological or practical side of this institutional work. It is simply done in a very haphazard sort of way and in fact, the greater part of it is not done at all.

FEMORAL HERNIA.

GEORGE GOODHUE, M. D.,
Dayton.

[Read before Ohio State Medical Association.]

The consideration of hernia in its various forms is forced upon both physician and surgeon whether he will or will not, and preparation to meet it wisely is the duty of every physician.

It has been estimated that one-tenth of the entire human family suffers from this complaint, and the United States census report attributes one death in every six hundred as due to this malady. This subject is also worthy of consideration from an economic standpoint, for there is no anatomic defect in the whole human system that impairs its usefulness to such an extent, or is in so great a degree a barrier to toil and its consequent emoluments as hernia is in its various forms. The radical cure of inguinal hernia has engrossed the attention of the leading spirits of the surgical world for more than a century. Under the leadership of Sir Astley Cooper and Scarpa the anatomical structures involved in the problem have been intelligently studied and defects in technique abandoned as the result of practical experience until finally a typical operation for inguinal hernia was evolved and presented to the profession in 1900 by Ferguson that is rapidly supplanting all others.

The same attention has not been given to radical cure of femoral hernia. This neglect may be attributed in part at least to its comparative infrequency.

In a recent report of St. Mary's hospital, Rochester, Minn., I find recorded 524 cases of radical cure of hernia in 1909, only twenty-six of which were for femoral hernia. This ratio is somewhat less than that indicated by the tables of Marcy and other students of hernial history

and may be readily explained by the fact that femoral hernias are most liable of all to become strangulated and such cases are rarely transported to a distant city but are left at home to be cured by local surgeons.

Another reason for the comparative inattention of surgeons to femoral hernia may lie in the fact that the ratio of cures has not been so great as in other varieties and that the field of operation is contiguous to important blood vessels and less easy of access than in the inguinal variety.

Inguinal hernia is rarely mistaken for any other malady while errors in differential diagnosis in femoral hernia have been numerous.

A few years ago I was called to open the abdomen for obstruction of bowels due to an unknown cause. The patient had been suddenly attacked with violent pain, with nausea and some vomiting supervening. An hypodermic injection of morphia had been given, two other physicians called, the family physician remaining all night. The patient had never had a hernia before and a visual examination of the abdomen did not reveal a tumor. A finger pressed over right femoral ring readily detected a hard knuckle of protruding substance and the cause of the trouble and proper method of relief were immediately revealed. This experience teaches that strangulation femoral hernias of severe type are some time very small and unrecognizable by sight and that we have not done our full duty as diagnosticians in any case giving symptoms of obstruction until we shall have palpated the femoral rings for possible intestinal protrusions. Marcy reports a case of femoral hernia where the intestine was divided under the supposition that the tumor was a suppurating bubo; also under a similar supposition, poultices were applied and death supervened from gangrene of the inclosed intestine. Varicosity of the femoral vein has been mistaken for femoral hernia. Sarcoma or lymphadenitis of glands normally found in this region have been mistaken for femoral hernia.

In femoral hernia the tumor descends vertically through the crural canal to the saphenous crening, at which point it is prevented from extending lower by the superficial fascia and its further progress is directed forward, carrying it before the cribriform fascia and thence upward, even above Poupart's ligament when by careless examiners it may be mistaken for an inguinal hernia. This downward-forward and upward course taken in femoral hernia must be taken into consideration by those attempting

reduction by taxis or their efforts are likely to be ineffective.

In this as well as other departments of surgery careful diagnosis and proper timing of operation are as much an index of a surgeon's ability as the mechanical performance.

Congenital femoral hernia is unknown. Femoral hernia before the age of twenty is exceptional and in children a rarity. Kingdon of London states that in many thousands of cases of femoral hernia personally examined by him he had only found it once in a child, and that at the age of eleven.

A consideration of the anatomical conditions involved in this hernia would lead us to infer that its production must be caused by prolonged strain or violent exertion far beyond the ordinary. The connective tissue sheath enveloping the vessels is strong and unyielding in the young and healthy, which explains its greater prevalence in the weak and aged or those exposed to unusual strain in their daily avocations.

The greater size of the canal in women, and the firmer character of the inguinal ring in that sex renders this variety of hernia more common in the female. It is generally believed that the results of operation for radical cure in this form of hernia are less satisfactory than in the inguinal variety. This is probably true in the hands of the novice who grows timid in the near proximity of pulsating vessels and too late comes to a realizing sense of his incompetency. He withdraws without having thoroughly completed any step in the operation and another unsuccessful operation is chronicled.

In the hands of experienced and competent operators the sheath of the large blood vessels is located at once and the operation is done with as much precision and confidence in results as in the other varieties.

Many men have evolved many methods to meet the requirements, each of which is usually labeled with the author's name. Mitchell Banks ligated the sack, but made no attempt to close the canal.

Ochsner, who is practical in his work and is usually a good leader to follow, has to some extent popularized this method and claims satisfactory results. It is based upon the fact that a ring in the human body deprived of mucous or serous membrane is naturally inclined to close. The objections to this method are that the ring in many cases is not a perfect one and never so in strangulation cases requiring incision. A large proportion of these cases are strangulated, requiring immediate interference with conditions rendering it impossible to empty the intestinal

tract. In these cases intra-abdominal pressure subsequent to operation causes a protrusion into the dilated canal and in case of vomiting perhaps a recurrence of the hernia.

What Ochsner may accomplish under the watchful care of trained assistants and nurses in a hospital practically under his own personal control, we under less favorable conditions, many times in the homes of our patients, too distant for further observation, ought not to attempt. It has been my good fortune to see him perform this operation several times. The thoroughness with which he separates the sac from the canal, removing every particle of fat and sometimes a gland located normally there has evidently much to do with his success. Stomach lavage often given on the operating table—raising the foot of the bed immediately upon return of the patient—total abstinence of food for ten days with the exception of minute quantities of predigested material and constant watchfulness of skilled assistants and nurses play an important role in the results obtained.

My own method, and that which I believe the safer for the average surgeon, closely conforms to that of Bassini, which consists in fastening Poupart's ligament to the pectineal fascia and muscle and sometimes the falciform ligament to the same structures by means of catgut sutures of such number as each case may require.

In conclusion I wish to emphasize the statement made by Ferguson that every case of femoral hernia except in case of extreme old age or infirmity should be subjected to operation for radical cure. This advice is based upon the extreme danger of strangulation in this variety of hernia which much sooner becomes gangrenous owing to the tense, firm, sharp border of the ring. This risk to life must never be underestimated. Trusses barbarous in every variety are rarely efficient in this form of hernia. The operation is fraught with little danger, and in the hands of experienced surgeons under proper conditions success is assured.

DISCUSSION.

W. D. Hamilton, Columbus: I think this is an important subject. I agree with the doctor as to the rarity of its occurrence and as to the formidable character too of the strangulating inguinals. I believe, too, that the radical operation should be done whenever there is an opportunity to do so, unless there be some invalidating physical fact which would render an operation unsuccessful in its outcome or perilous to the patient. I suppose when strangulation occurs, it would be well to consider the possibility that the bladder might be engaged in the hernia mass, and to recognize what the hernia contains would

be important. It has been our practice to expose the sac, define it anatomically by dissection, tie it off and drop it, and then try to approximate Poupart's ligament over to the pectineus muscle or fascia overlying it, thereby making this button space on the side of the femoral vein much smaller. As a rule, it is entirely successful as a surgical procedure. I think the doctor's paper is a very valuable one.

R. B. Hall, Cincinnati: I don't think a valuable paper like this should go without discussion, and I rise to endorse it. I think it is a valuable one, the points of which every physician in the practice of medicine should keep constantly before him in dealing with hernia. Of all varieties of hernia the physician is called upon to treat the femoral hernia requires the most prompt action. It is not unusual for femoral hernia in six hours to have dead tissue in the hernial sac, and very frequently in ten or twelve hours. The last speaker called attention in dealing with these cases you may have the bladder in the hernia sac, and I would emphasize you might have something else. I remember distinctly a case I reported some time ago of a woman, past 65 years of age with femoral hernia, with irritant symptoms, and I was asked to see the case with the late Jos. Eichberg. On opening the sac we found the vermiform appendix in the sac. I think the doctor's technic as outlined is usually followed by men doing these operations for radical cure, and I feel certain if that is followed out recurrences will be rare. A larger per cent. remain permanently well from femoral than from inguinal hernia, and the secret of success is to clear the field of fat and glands, and then by catgut ligature repair the opening as much as possible. I want to repeat that I think the doctor has done the society a good service in his paper, and it ought to stimulate every doctor to be ready with his knife and a few catgut sutures to operate any case as soon as he gets into the room. I remember another I saw a few years ago, a case of intestinal obstruction in a woman 65 years of age, with a gangrenous bowel in the inguinal ring.

George Goodhue (closing): I spoke in my paper relative to the necessity of noting the natural course of the descending femoral hernia, and suggested the necessity of it if we wish to succeed in reducing a hernia by taxis. I will enlarge a little upon it and say, as the inference might be drawn from the paper that I do not believe that the proper thing is to endeavor to reduce a femoral hernia by taxis except for temporary reasons, in the country for instance, that it can be easily reduced or operated, even before transporting the patient to a hospital. And it would be proper in cases of great infirmity. I made the attempt two or three months ago in a woman who was 70 years old, but failed to reduce it. I want to impress another thing that is not fully stated in the paper, and that is, the desirability of introducing your stitches through the pectineal muscle and fascia well down upon the pubic bone, carrying it close, so that you will bring the ligament well down over the surface of the pectineus muscle and fascia instead of having just the edges.

THE PROTECTION OF CHILD LIFE.

CHARLES O. PROBST, M. D.,
Columbus.

[Read before the meeting of the State Medical Association.]

The child comes into the world naked and helpless. Without prompt aid to warm and nourish, it must perish. For a considerable time it is powerless to feed itself, and for years is unable to earn or procure necessary food and clothing. It must be taught a thousand and one things to enable it to become a self-supporting, useful citizen.

This needful care has been left largely to parents. The state so far has assumed more or less careful or protective charge of abandoned children only.

While nature shows great prodigality in perpetuating plant and animal life, the terrific waste of child life would seem to be largely unnecessary. Three hundred and seventy-five thousand infants under one year dying annually in this country calls for attention. It is a disgrace to civilization and a reproach to preventive medicine.

Well planned campaigns for the reduction of infant mortality have already achieved marked success in a number of cities. It is largely a question of clean milk and properly instructed mothers.

To secure these is a difficult problem, and especially in large cities. Milk comes in from hundreds, and for some cities from thousands, of farms, some of it from long distances. Originally clean milk, without ice, which the very poor cannot afford, may become poisonous before it reaches the baby consumer. Mothers of the poor and ignorant classes are entirely unfit for the proper care of a baby, and especially a bottle fed baby. Poverty often drives these poor mothers to work, and breast feeding is cut off even where physically possible.

Should it be considered a governmental function to assume control of these conditions and remedy them, as far as possible, or should we leave it to philanthropic societies? Both forces are at work. Baby dispensaries and visiting nurses are supported by public funds, administered by the health authorities in New York City. In Cleveland this work is being conducted by private charity.

It seems to me that the saving of human life should be left largely to governmental agencies. Human life, which means productive energy, should be regarded as one, the main one in fact, of our natural resources.

Professor Irving Fisher, in his report on national vitality, considers a human life at birth to be worth to the state \$90, and at five years to be worth \$950. Leaving out all other considerations for saving human life, why should the state wait upon uncertain and fitful private charity to combat this gigantic financial loss?

What could the state do in a practical, effective way? Without proposing new measures, which would, however, doubtless be evolved, the state could greatly extend and perfect measures that have already in a limited field proved effective. These are, control of the milk supply, education of dairymen and parents.

An advanced thinker, a member of the last Legislature, in speaking in favor of a medical school inspection bill, said, "I have long advocated that the child belongs to the state and that the parents are merely its trustees."

On such a platform the state could do much. The state could regulate the construction of dairy barns by prescribing minimum sanitary requirements. This is done in some countries. It could regulate the production and shipment of milk. It could place one or more competent and honest inspectors in each county to enforce its requirements. These might at the same time be dairy experts and give instructions to dairymen.

The State of Maryland some years ago had a state dairy exhibit which attracted many thousands of visitors. The state might have a traveling dairy exhibit along the lines of a tuberculosis exhibit, with competent lecturers to instruct the people regarding the dangers from impure milk and how to avoid them. It could teach this very thoroughly to the older school children, of which more anon.

The State of Pennsylvania is maintaining 114 free dispensaries for treatment and instruction in tuberculosis. It might maintain any sufficient number of baby dispensaries. It could go into the pure milk business for babies, if necessary. Rochester, New York, did this with most favorable results. In New York City every child born in certain districts is visited by a trained nurse, paid by the city, who instructs the mother in the care of the baby.

In a democratic country the state can effectively do only such things as the majority of the people are in favor of. To try out reforms of the nature here suggested, we must have public opinion to support them. A radical change in public opinion which requires not only a change in the ideas and habits of generations but the expenditure of large sums of money, comes very slowly. We are bound like Gulliver, by little

threads of opinions and habits which hold and cross us in every direction.

I am about convinced that we would make much more rapid advances in all lines of health work if we were to stop trying to teach old dogs new tricks and turn our attention largely to the school children. The trouble is that the great mass of men and women are still children in their lack of information and erroneous ideas regarding health matters, and will not take time to learn.

What I suggest would mean a radical change in our school system, although along lines that have already been started. I realize, of course, that such change can come only from a change in public opinion, and I have already stated how difficult this is to bring about.

I am convinced that a large part of our losses in health and from premature death, is due to ignorance that might be largely removed by adequate instruction in our schools and colleges. I recently had occasion to propose to the School Masters' Club of Michigan that one-half of the time in the upper grade schools and in colleges, be devoted to instruction in hygiene and sanitation, and physical education. The proposition was not laughed down, as I half expected, but was favorably commented upon by the president, who is also a college president.

Such a plan contemplates a new man in school life—a school physician. It means medical supervision and not merely medical inspection of schools. The school physician should be specially trained for such work, and should be a successful teacher, for he should have charge of, and should conduct some of the classes in hygiene and sanitation. Apparatus, models, charts, drawings, lantern slides, et cetera, would enable him to show many things talked about. He should give all his time to the work, and have equal authority with the school superintendent. He should direct play and exercise and control the child in all matters affecting its health.

I recently witnessed class gymnastics for girls in Ann Arbor University. I was told that a considerable number of the girls had to be given special corrective exercises to overcome or lessen physical defects. Few of our girls reach the university; and how much easier it would be to correct defects earlier. Defective posture changes the rightful position of important organs and must more or less interfere with their proper functions.

School nurses should be provided, and already are in many cities, to help the school physician correct home conditions.

Some of our European schools, especially in France, are now furnishing free, or at a small

cost, nourishing meals for underfed children. A kitchen and dining room might well be attached to some of our schools in slum districts.

Our juvenile courts might require parents, when able, to pay for a noonday meal at school. When not able they might be charged to the pupil, to be paid back later in life where possible. This would furnish occasion to teach moral obligation and a spirit of independence; and I am willing to believe that in most cases the money would be refunded.

These measures may seem impossible of attainment, but each of them is now being carried out to some extent in some city or another. The one most lacking is in giving adequate instruction in hygiene and sanitation.

Hygiene is taught to some extent now along with physiology and the effect of narcotics. This study, forced into the schools by the woman's study, forced into the schools by the Woman's most teachers, because they realize that they have but little knowledge of the subject. Children are often given ridiculously erroneous ideas in regard to health matters. I will admit, however, that the text books have improved and that the subject matter is better presented than formerly.

With a school physician to take charge of this work the study of health matters could be greatly extended. It would seem to me possible, given sufficient time, to thoroughly instruct every school boy and girl above fourteen years in the broad principles of municipal sanitation. The necessity for a pure public water supply, and how to obtain it by filtration or otherwise; the purposes and advantages of a sewerage system and the necessity for sewage purification in certain cases; street paving and street cleaning; parks; regulation of markets and food supplies, and many other features of municipal life that will effect the future health of those so instructed, could be presented in a comprehensible way.

Domestic hygiene and sanitation should have special attention. How many men and women know the requirements of a healthful home? In personal hygiene the young children should be taught to do rather than know certain things.

In the high school, and still more in colleges and universities, the subject should be still farther extended. The economics of sanitation, and its relation to sociological and other broad problems of government, should be fully presented.

Most of our school books might be utilized to teach health subjects. Sums in arithmetic could deal with sanitary problems as well as with interest of land measurements. For example, if a school child requires 2000 cu. ft. of fresh air per

hour, how much air will 40 pupils require in 5 hours?

If a circular air duct 40 inches in diameter supplies this air, how many feet per second must the air travel? So a large number of questions relating to light, floor space, water supply, sewerage, food, etc., might be utilized in teaching arithmetic to call attention to health requirements.

In the study of geography the use of differently colored maps might show, for instance, the relative prevalency of tuberculosis in different countries. The contrast between England and Ireland, and the reasons for the much higher death rate from tuberculosis in the latter country, would serve as a basis for an interesting lesson in tuberculosis as well as in the habits and characteristics of the people of Ireland, which, after all, should be included in civil geography.

In teaching history the great plagues could be recalled to show the blessings improved sanitation and vaccination have already conferred upon mankind.

What more marvelous or more interesting story could be written than Reed's work in yellow fever? And if great deeds are to be chronicled to inspire patriotism and love of mankind, why should the heroes of needless, godless wars, with their terrible losses of life, be selected rather than the heroes of life-saving, preventive medicine, who have laid down their lives in battling against, or in searching for, the cause of pestilential diseases?

In making the somewhat bold suggestion that half time might be given to physical education and the study of hygiene and sanitation, I had in mind the possibility of working into many of the school books, beginning with the primer, various axioms, problems, and historical and other matters relating to health. As the main object of school education is to cultivate and develop the mind, I see no reason why a great variety of health subjects would not as readily lend themselves to this object as many others now made use of which are of much less importance to the individual and to the state.

If such instructions were thoroughly carried out for two or three generations, there would undoubtedly follow great improvements in all matters affecting health. If we had to deal with presidents, members of congress and legislature, members of council and school boards, who had themselves been given such instructions, our efforts for a National Health Department, for pure food and drink, for medical inspection of schools, for adequate building laws, and for many other things the medical profession and sanitarians have been

striving for in the interest of public health, would be vastly easier of attainment.

Let us begin now to educate in health matters the grand parents of children to be born fifty years hence, as advised by Dr. Holmes.

DISCUSSION.

W. W. Brand, M. D., Toledo: It is an extremely difficult thing to discuss such a magnificent paper of such wide reach as that just heard. The old general theme is the basis of all public health work, and that is to educate the child, for the child very soon becomes the father, and then the grandfather, and their children may be the legislator, the governor, or even the president of the United States. With children thoroughly taught in the laws governing health, it is possible to see the value and advantage of all the things Dr. Probst has gone over. There is the very great problem of municipal regulations and municipal board of health which plays an important role. Politics has become an essential in most health departments. In a certain health department in Ohio, the old secretary has been succeeded by a man, who had been a few weeks ago a metal polisher. The legislators are to blame; not only they, but the city councils and the mayors. This is not only a single instance, but it is so in a great many cities in the United States. It is an incoordination, each trying to do something in this line, but doing nothing together. The idea to educate the child, and have him educate his children to become legislators is the only way to control this enormous subject of public health work.

John Lowman, Cleveland: We cannot get at this thing in generalities. All the two gentlemen have said is true. There is an enormous mortality, a very large per cent. But you have got to cut this out by doing something particular. In Cleveland the idea of the children's hospital grew out of the dispensary, and then we felt the well babies should be supervised, and that led to the baby dispensary. The handling of the infant is the first step. The particular thing to be done for the lowering of infant mortality is the establishing of a dispensary for the supervision of well and sick babies. This little dispensary in Cleveland was started without cost, a room found, and now it has blossomed out into the babies' dispensary. They have under observation many thousands of babies every year. They treat well babies as well as sick. It is understood that every baby that is born can be taken to that dispensary and watched, and the mother instructed up to the sixteenth month. The city cooperates, and sends the name of every child born to the dispensary. If it is found a visitor would be acceptable, the inspector is sent. If very poor, the child is invited to the dispensary, and he is cared for, sick or well. There are now outlying dispensaries to which the baby is brought, and if sick, he is sent to the central dispensary. The inspector is also expected to report as to the physical and civic condition of these people, whether they can have a physician, and whether it is right for these people to have gratuitous treatment. The child is dismissed if the inspector shows the family is not sufficiently poor. There are always a large number that cannot have proper medical care. We have six visiting nurses who

visit the homes of the poor, and often we have fifty or sixty babies at the dispensary. The scientific work is high and the sociological work is high, and everything is carried on at the highest pitch of usefulness. It is believed that in the children observed by that dispensary the percentage of mortality and sickness is much lower. That is the way to proceed to wipe out this infant mortality.

A. B. Wilkins: I have practiced medicine forty years, and my experience is that the paper did not go far enough. I was once a member of the Ohio Senate, and am mayor of the town in which I reside, and I know the one thing we must do is to educate the child. We fail because the business men and professional men who should be educated to help us will not do so. It is difficult to get a physician to put up a notice of a contagious disease. One of the hardest things is to get the people who support him to carry out his ideas.

Dr. Probst (closing discussion): I realize the difficulty of getting people to do things, and that is why I advocate educating children, and I think the trend has been educational. In fact, in every health meeting one attends they are preaching the necessity of teaching the people.

I just want to say that a well-backed bill for medical inspection in the schools which provided for a physician as a teacher in the schools, was presented to the last legislature, and was defeated by the united efforts of the Christian Scientists and other drugless healers.

BOOK REVIEWS

SPONDYLOTHERAPY. By Albert Abrams, A. M., M. D. Cloth. 420 pages. 100 illustrations. Price \$3.50. The Philopolis Press, San Francisco.

This is a rather new departure and yet perhaps may have some important message for the regular profession, which, according to the author, has not paid sufficient attention to the subject under discussion.

His history of his topic is interesting and well written; his theories challenge the attention of the reader, whether he accepts them or not.

POCKET THERAPEUTICS AND DOSE-BOOK. By Morse Stewart, Jr., B. A., M. D. Fourth edition, rewritten. Small 32-mo of 263 pages. Philadelphia and London. W. B. Saunders Company, 1910. Cloth, \$1 net.

The above work in scope and character is quite fully described by the title; it presents in convenient form for ready reference a considerable amount of condensed information.

HEART DISEASE, BLOOD-PRESSURE AND THE NAUHEIM-SCHOTT TREATMENT. By Louis Faugeres Bishop, A. M., M. D. Publishers, E. B. Treat & Co. 1909.

The appearance of a third edition of the above in seven years shows the interest in recent times in the topics under discussion.

It is divided into two parts, as indicated by the

title; the phraseology is simple and untechnical, but somewhat involved at times with a lack of continuity of thought.

Part one is rather disappointing; we cannot feel that the headings of the chapters are borne out by the text. The description of the author's instrument is clear, but there are now many sphygmomanometers available which seem to us to be much more convenient and reliable.

Part second is much more satisfactory; the descriptions of the Nauheim baths and Schott treatment are very good. The photographs illustrating the latter are particularly clear and illuminative of the text.

ESSENTIALS OF HISTOLOGY. Fourth Revised Edition. Essentials of Histology, with questions following each chapter. By Louis Leroy, M. D., Professor of Theory and Practice of Medicine, College of Physicians and Surgeons, Memphis, Tenn. 12mo of 284 pages, illustrated. Philadelphia and London; W. B. Saunders Company, 1909. Cloth, \$1 net.

The fourth edition of this work has been brought up to date and is a very complete compend on the subject.

It should prove to be valuable to the practitioner and student who wishes, in a limited time, to review the subject.

THE SEXUAL LIFE OF WOMAN. By E. Heinrich Kisch, M. D., Professor of the German Medical Faculty of the University of Prague; Physician to the Hospital and Spa of Marienbad; Member of the Board of Health, etc. Translated into the English Language from the German by M. Eden Paul, M. D., Illustrated. Rebman Company, New York. Price \$5 net.

The author presents us with a very carefully prepared treatise on a highly important subject; he treats his topic thoroughly, viewing every phase and giving his views and those of others in an eminently broad-minded and frank manner.

There is no question but that we need in this country more of such literature, which, quite the opposite of prurient, candidly discusses subjects which even physicians are too apt to consider tabooed. Many of the evils mentioned by Prof. Kisch are the result of the habit of cloaking with mystery and concealing many physiological functions and requirements, and a broader attitude, and plainer treatment of these subjects by physicians would help, we believe, in the solution of questions physical and moral of wide reaching results.

The author of the above volume divides his time into three periods of life, and enters into detailed description of the anatomy, physiology

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THE PRACTICAL VALUE OF THE WASSERMANN REACTION.

The scientific value of the discovery by Wassermann of his now well known test for syphilis is quite universally admitted, but as the California State Medical Journal recently expresses it: 'As experience accumulates, misgivings arise in regard to the extent to which we may trust the verdicts of the test in practice.' This is not due to any question of the principle itself; that would seem to have been quite conclusively demonstrated, but the test is so essentially dependent upon proper methods, exactitude in technique, and the suitable reagents, that as often carried out, there must be room for error in the results and their interpretation.

That this is the case is shown by the very warm discussion which occurred in the Berlin Medical Society recently, as related in the above named journal, when one Dr. Freidenberg gave his experiences with the reaction obtained in different laboratories. It seems that he had received some conflicting reports, and therefore determined in a particular case to control the tests by having duplicates made in other laboratories; the result led to worse confusion and convinced him that the conclusions developed by the Wassermann reaction must

be accepted with caution. His experience in the special instance was as follows: He sent a specimen of blood of the same patient to two laboratories; of these number one reported the test "positive," and number two "negative." A week later he obtained from the same patient a quantity of blood, divided it into four parts, and sent each to a different laboratory. No. 1, which formerly reported "positive," now reported "doubtful, probably negative"; No. 2, which before had reported negative now reported "positive," while Nos. 3 and 4 both reported "negative." It seems that the clinical course of the case in question convinced him that the disease was not syphilis. Other members reported similar experiences, while others gave confirmatory evidence of the value of the test.

Wassermann himself was finally drawn into the argument, and strongly repudiated all modifications of his original method and protested against ascribing the varying results of the method *per se*; he indicated that imperfect technique and improper reagents were probable responsible; he claimed that the results in his own laboratory were not conflicting.

"He recognized only one Wassermann reaction, that one which was performed

strictly according to his directions and with the reagents recommended by him. He had purposely guarded against making the test too sensitive, contenting himself with positive results in 98 per cent of syphilitic individuals; for if too sensitive it might occasionally have branded a non-syphilitic person as syphilitic. Such a slight inaccuracy in the method was deemed harmless, for there had never been any intention of eliminating the physician himself from the solution of the diagnostic problem."

The result of the discussion appears to be that no discredit was thrown upon the Wassermann reaction, its worth has been too widely recognized for that, but it was the general opinion that the practitioner before accepting as conclusive the reports of a laboratory should be convinced of its reliability. The test is complicated, the technique intricate, and opportunities for errors numerous.

If in Germany, where the mental characteristics appear especially adapted to laboratory investigations, painstaking, conscientious, unimaginative and usually extremely accurate workers are the rule, lack of harmony is being demonstrated, may we not look for the same thing in this country? "Laboratories" are springing up on all sides; every community of any size at all possesses one or more, and while we profoundly believe that it is a great step in advance, a matter of greatest assistance to the medical profession in diagnosis and treatment of a great number of diseases, yet we must remember the Wassermann reaction is not to be performed by every one, but only by skilled laboratorians with well equipped laboratories.

The ordinary clinical investigations require skill and training for accurate work, which may be readily acquired by any intelligent physician in a relatively short course of training in the various post-graduate course. Such a course does not fit the average man to do the more advanced work, such as the Wassermann reaction. The diagnosis of syphilis is too important a

matter to allow the taking of chances; the clinical manifestations, in probably the majority of cases are quite distinctive, and therefore before accepting as absolute the finding of a given laboratory, its technique and trustworthiness should be thoroughly investigated in advance and its reports controlled by the clinical evidence in as many cases as practicable. In the interest of our patients, in the interests of practitioners and in the interests of laboratories themselves, this subject should be thoroughly aired and the "facts of the case" brought to light.

FLORENCE NIGHTINGALE.

The death of Florence Nightingale on August 13 calls for a general notice from physicians the world over, for they better than all others can appreciate the incalculable services she has rendered to suffering humanity.

With the consecration of a hallowed purpose and the intrepidity of a true reformer she stepped down into the mire without being defiled, raised therefrom, almost single-handed the noble profession which as the hand-maid of our profession has done so much to relieve sufferings and distress in all civilized communities.

It is difficult for us to realize the condition which existed only some sixty years ago; the religious institutions did their best, but they were bad enough, while the secular hospitals were simply unspeakable, to which in many an instance patients had to be conveyed by main force. Nurses in such were a drunken, degraded, immoral set of creatures, and as might be expected, the mortality of the patients under their care was greater than among the same class at their own homes. One has only to remember the description of Sara Gamp to get an idea of the type.

It is all the more remarkable that Florence Nightingale, born into a wealthy and refined family, reared in the atmosphere of

a period in which young women of her class cultivated delicacy of appearance and affected ultra refinement, should so apparently violate all the traditions and proprieties and embark on a pursuit so revolutionary. Convinced of her mission in life she was deaf to all remonstrances and blind to all obstacles. She sought the best in the Catholic hospitals on the continent, and studied under Pastor Fliedner of Kaiserwerth, but in none did she find her ideal; in all these, nursing was secondary, religious teaching and proselyting were the chief objects. It was her dream to establish nursing as a distinct profession, and her pertinacity of purpose, persistence under all discouragements, and willing offering of health and almost life itself, entitle her to her prominent place among the world's famous. To us and the world at large, her greatest achievement was in the founding of the training school for nurses in connection with the old St. Thomas Hospital, from which grew the entire present system. Far more spectacular, and more heroic in the ordinary sense, were her services at Scutari, and for these was she specially dear to the British heart. But whether in the camp hospitals of the Crimea or in the daily struggles against petty jealousies, ignorance and vicious methods of the London hospitals, she was a consistently great and consecrated woman.

And in all times and in all countries as our own, Longfellow wrote of her years ago:

"A lady with a lamp shall stand
In the great history of the land
A noble type of good
Heroic womanhood."

THE NATIONAL LEAGUE FOR MEDICAL FREEDOM.

We have refrained from noticing this remarkable body heretofore, for the simple reason that its purpose in life is so obvious, and the character of its sponsors so apparent as hardly to call for any remark.

Since, however, it has, as we believe, recently invaded our state, and made the late Republican Convention the scene of its pernicious activities, it may not be amiss to consider the subject very briefly.

As far as we have been able to discover the League is made up chiefly of christian scientists, irregular practitioners, anti-vivisectionists, patent medicine manufacturers, drug and food adulterators and others of like ilk whose interests supposedly would be injured by national supervision of health matters. The above are the active workers who have sought to entrap into membership recruits from the masses, and have doubtless succeeded in securing a certain percentage of cranks who are always "agin the government" and of that class of not very vigorous mentality which is always rushing after something new.

The president is one B. O. Flowers, a christian science editor, and on the advisory board, so-called, are the president of the American Druggist Syndicate, the president of an anti-vivisection society and several others of similar irregular mental bias and pursuits. The sole excuse for being and aim in life of the League is to defeat, if possible, the establishment of a National Department of Health, seemingly by any means available. It sprang into existence fully panoplied, like Pallas Athene; it offered all the rights and privileges of membership without money and without price, though at the same time spending \$25,000 a day in advertising, together with additional sums for lobbyists at Washington. The character of these advertisements is familiar to all; the League burns to restore the poor down-trodden people to liberty from the tyranny of the medical profession; it depicts in lurid terms the horrors of the "medical trust"; it "exposes" the arrogant aims of the regular physicians, and shrieks calamities unspeakable should the Owen bill become a law.

It seems puerile to really consider these

fabrications at all seriously—they are so absurd, so obviously the product of a perverted imagination, but we must remember that in medical matters the general public believes almost anything and therefore it behooves us to give the above sufficient attention so as to be ready, as the occasion requires, to explain as patiently as possible to our clientele the motives and character of this same old foe in another guise, lest they be misled by the blatant claims and specious statements so alluring to our fellow citizens when offered under the name of “freedom.”

EDITORIAL NOTES

THE OWEN BILL FOR THE ESTABLISHMENT OF A FEDERAL DEPARTMENT OF HEALTH, AND ITS OPPOSITIONS.—S. Adolphus Knopf, M. D., Professor of Phthisio-therapy at the Post-Graduate Medical School and Hospital, New York.

Anyone who is familiar with the workings of governmental departments of health such as exist abroad, who has seen or experienced the sanitary benefits bestowed upon the people by the Reichs-Gesundheitsamt of Germany (Imperial Department of Health), the Conseil Supérieur de Santé Publique de France, and the similar institutions of most European governments, cannot help feeling amazed that any opposition should exist to the establishment of a federal department of health in this country. This amazement becomes all the greater when one considers some of the elements of which the opposition to that measure is composed. There is, for example, the New York Herald, a large and influential newspaper with an honorable career and a brilliant record for advocating everything that is conducive to the public welfare. Only in this particular instance has it allowed itself to become the mouthpiece of principles to which it is in general opposed, that is to say, principles and measures whereby the good of the people at large and the progress and welfare of mankind are hindered, and the lives of individual American citizens endangered. This particular newspaper is independent of any political party, or professional or religious association which might prejudice its point of view, and still it opposes a measure whereby all citizens of the country would benefit. The writer cannot help thinking that this powerful news organ has not informed itself thoroughly of the real purpose and function of a federal department of health, and in its attack upon a large body of men such as compose the American

Medical Association, the American Public Health Association, the National Association for the Study and Prevention of Tuberculosis, the American Association for the Advancement of Science, and the various medical academies of the country, it is certainly misguided. It is to be hoped that the distinguished editors of the New York Herald will soon see that in their attitude toward the Owen Bill they are not on the side of the people, but are working against the welfare and interests of the masses.

The principle of the Owen Bill, establishing a Department of Health, has been endorsed by the President of the United States, by General George M. Sternberg, Surgeon General of the Army (Retired), and Rear Admiral Charles F. Stokes, Surgeon General of the Navy, by General Walter Wyman of the Public Health and Marine Hospital Service, by Dr. Harvey W. Wiley of the Bureau of Chemistry, by Governors of States, by the Conference of State and Territorial Boards of Health, by the United Mine Workers of America, by the National Grange, by the Republican and Democratic platforms, and by numerous other organizations.

What is the principle of this bill which is advocated by thousands of men trained in medicine or sanitary science and interested in the public welfare?

Section 7, which embodies the main purpose of the Owen Bill, reads as follows: “That it shall be the duty and province of such a Department of Public Health to supervise all matters within the control of the Federal Government relating to public health and to diseases of animal life.”

Section 2 of this bill deals with the unification under a Secretary of Public Health of the various agencies now existing which affect the medical, surgical, biological, or sanitary service.

There has recently been formed an organization which calls itself “The National League for Medical Freedom.” It has for its purpose to combat the Owen Bill; it is opposed to the establishment of a Federal Department or Bureau of Health. The name of this organization is certainly, if not intentionally, misleading. It cannot claim to battle for medical freedom, for there is not a word in the entire bill which could be interpreted as limiting the practice of medicine to any particular school. Their claim that the establishment of such a bureau of health would have any resemblance to a medical trust is entirely unfounded.

The life insurance and industrial insurance companies which advocate this bill certainly have no desire to limit medical freedom or to repress any system which offers the chance of lengthen-

ing human life. These companies do not favor medical partisanship, and their sole interest is to prolong the lives of their policy-holders by whatever means possible. Their actuaries state specifically that they believe human life could and would be lengthened by the establishment of a Federal Department of Health.

Lee K. Frankel, Ph. D., representing the Metropolitan Life Insurance Co., is a member of the Committee of One Hundred, appointed by the American Association for the Advancement of Science to further the propaganda for the establishment of such a department. Neither the above-mentioned great newspaper nor any of the leading spirits of the "National League for Medical Freedom," all of whom, I regret to say have allowed themselves to ascribe the worst motives to the members of the committee, will deny that the names of the officers of this committee show that it is thoroughly representative of the highest type of American citizenship. The officers of the Committee of One Hundred are:

President: Irving Fisher, Ph. D., Professor of Political Economy at Yale University.

Secretary: Edward T. Devine, Ph. D., LL.D., Professor of Social Economy, Columbia University, and Secretary of the New York Charity Organization Society.

Vice-Presidents are: Rev. Lyman Abbott, D. D., LL.D., Emeritus Pastor of Plymouth Church, Editor of The Outlook.

Jane Addams, A. M., LL.D., Founder and Head-worker of the Hull House Settlement; ex-President of the National Conference of Charities and Correction.

Felix Adler, Ph. D., Professor of Political and Social Ethics, Columbia University; Leader of the N. Y. Society for Ethical Culture.

James B. Angell, A. M., LL.D., Professor of Modern Languages and Literature and President Emeritus of the University of Michigan.

Joseph H. Choate, LL.D., D. C. L. (Oxford), Diplomat and United States Senator.

Charles W. Eliot, A. M., LL.D., President Emeritus of the University of Harvard.

Rt. Rev. John Ireland, LL.D., Archbishop of St. Paul.

Ben B. Lindsey, Judge, Reformer and Author, Denver, Colo.

John Mitchell, President of the Labor Union of America.

Wm. H. Welch, M. D., LL.D., Professor of Pathological Anatomy, Johns Hopkins University.

Need I say anything in defense of the Committee of One Hundred after having given the names of its officers?

Direct and most unkind comments, not to use a stronger term, have been directed especially against one vice-president of the committee representing the medical profession. I refer to Dr. Wm. H. Welch, M. D., LL.D., President of the

American Medical Association. Those who know Dr. Welch, and even those who only know of him, would justly think it absurd if I should see the need to say even a word in defense of this master of medical science. To us it is indeed difficult to understand that there could be any man or woman in this land capable of speaking ill of Dr. Welch. There is no name in the medical world which is more honored in this country and abroad, no medical teacher more admired, no one who has a larger following than this Johns Hopkins professor of pathology, and no physician more beloved and looked up to as representing all that is best and noblest in the profession than Dr. Welch. If there is any man in the American medical profession who is unselfishly devoting his high intelligence, his time, and his means to the public welfare, it is Dr. Welch. Gladly do we acknowledge him as our leader.

To accuse the president and members of the American Medical Association of selfish motives in advocating the establishment of a Federal Department of Health is absurd. If there ever was an unselfish movement inaugurated, it is this one. It is a movement by physicians for the reduction of disease which *ipso facto* means a movement against their financial interests.

The writer is a member of the regular profession; he nevertheless would not wish for a moment to limit the freedom of any citizen to choose his physician from some other school or cult, providing the individual assuming the function and responsibilities of a physician had the training necessary to prevent him from endangering the life of his patient by lack of medical knowledge or skill.

The official mouthpiece of this "National League for Medical Freedom" is Mr. B. O. Flower, who had heretofore the reputation of a fighter for everything involving the spiritual, social, and physical progress of humanity, and it is inexplicable to many of his admirers how he can lead a movement opposed to the improvement of the health of the nation. The vast majority in the ranks of this so-called "League," though they may be well meaning, noble, and earnest, are not men and women who have toiled patiently for years in order to acquire the thorough scientific medical training which enables one to assume that great responsibility of the care and treatment of the sick. They are unable to appreciate the inestimable value of federal help in preventing disease. These people are blindly following certain individuals who designate the regular profession as a medical trust, and accuse the thousands of noble men and women who are devoting their lives to the alleviation of human ills of a desire

to monopolize medical practice. The establishment of a federal department of health would mean pure food, pure medicine, control of plagues and epidemics, the advancement of medical science and through it the improvement of the health and increase of material wealth of the nation. It is said that many of the individuals opposing the Owen Bill are commercially interested in the manufacture of drugs or patent medicines, of which latter the American people swallow about \$200,000,000 worth annually. Whether it is true or not that the National League for Medical Freedom is backed financially by drug manufacturers and patent medicine concerns, I am not prepared to say; yet even these men have nothing to fear from a Federal Department of Health if the drugs they put on the market are pure and the claims made for patent medicines do not delude the public or endanger its health. The element which clamors most loudly for medical freedom is composed in many instances of men and women who have attended one or two courses of lectures or got their "degrees", without any training at all, and have developed into "doctors" and "necalers" in a most remarkably short space of time.

Because the American Medical Association has always advocated a thorough medical education, is pleading constantly for pure drugs, is opposed to quackery, patent medicines and nostrums, its 40,000 members are considered a medical trust. Yet it is in the ranks of this very American Medical Association that are found the greatest number of unselfish devotees to preventive and curative medicine. It is among this association that are found the men who have added the greatest glory to the medical and scientific reputation of this country. America's greatest surgeons—Marion Simms, Gross, Sayer, O'Dwyer, Bull—were members of this association. McBurney, Jacobi, Stephen Smith, Welch, Osler, and Trudeau have graced this association by their membership for nearly half a century. The heroes in the combat against yellow fever—Reed, Lazare, and the hundreds of others who have devoted their best energies and knowledge and often sacrificed their lives for the sake of medical science were members of the American Medical Association.

One of the most illustrious members of the American Medical Association is its former President, Col. William C. Gorgas of the U. S. Army, Chief Sanitary Officer at Panama, an adherent to the regular school. It is, thanks to the genius, the scientific and thorough medical training of Dr. Gorgas, that the formerly deadly Isthmus of

Panama has now become as sanitary a region as any. A great patriotic enterprise, important to commerce and the welfare of nations, was made possible by this man. He has labored and is constantly laboring for the establishment of a federal department of health because he knows the inestimable benefit which such a department would bestow upon the nation.

Whatever advance has been made in medical science in America or in Europe has been made by scientifically trained men or by physicians not without but within the ranks of the regular profession. The greatest benefactors of mankind are those who diminish disease by prevention and cure. As another illustrious example of medical benefactors, may I be permitted to cite that great trinity of scientific giants who through their labors have accomplished so much in reducing disease and lessening human misery in all parts of the globe? They are Pasteur of France, Lister of England, and Koch of Germany; all of them aided their governments by direct participation in the governmental health departments. We are still mourning the death of perhaps the greatest of the three—Robert Koch. I do not believe that there is, even in the camp of our opponents in this so wrongly called "League for Medical Freedom," a single intelligent individual who will deny the inestimable benefits which Koch has bestowed upon mankind through his discovery of the germs of tuberculosis, of cholera, of the spores of anthrax, of tuberculin, and through his many other equally important scientific labors. Yet, had it not been for the Imperial German Reichs-Gesundheitsamt, which is the equivalent of the institution we are striving for—a Federal Department of Health—Koch never would have been able to devote his life, energy, and great genius to those important discoveries through which thousands of lives have been saved in all civilized countries during the past few decades. It was while working in this governmental institution, which is doing exactly the work the Owen Bill asks the Federal Department to do, that Koch discovered the tubercle bacillus and the bacillus of cholera. Because of the discovery of the common bacillus, we no longer have those fearful cholera epidemics which formerly decimated our own and other countries. This disease can now be easily diagnosed and by proper quarantine its mortality can be reduced to a minimum. And what shall we say of the progress that has been made in the fight against tuberculosis because the Federal Department of Health of Germany enabled Koch to do research work and thus discover the bacillus of tuberculosis to be the primary and only direct

cause of the disease? As director of the Hygienic Institute and member of the Reichs-Gesundheitsamt he inaugurated that wonderfully effective campaign against tuberculosis whereby the mortality from this disease in Germany has been reduced to nearly one-half to what it was prior to the discovery of the tubercle bacillus.

Under Koch's inspiration and guidance and in the same institute many great scientific discoveries of incalculable value to humanity were made. Foremost among them are the works of Ehrlich, one of Koch's most celebrated pupils, who recently gave to the world a new remedy which promises to prove a specific in an affliction from which mankind has suffered for centuries.

As co-worker in the Kaiserliche Gesundheitsamt and the Institute for Infectious Diseases, affiliated therewith, we must also mention Behring, the discoverer of the anti-diphtheritic serum. Thanks to the discovery of this serum thousands of young lives are now saved which would formerly have fallen victims to the terrible disease known as malignant diphtheria. This was made possible by the opportunity given to the workers in the Reichs-Gesundheitsamt and Imperial Institute for Infectious Diseases.

Can there be any better argument in favor of the establishment of a Federal Department of Health?

A VERY TIMELY MEETING WHICH SHOULD YIELD EXCELLENT RESULTS.

American Association for Study and Prevention of Infant Mortality.—A special report on birth registration is being prepared under the direction of Dr. Cressy L. Wilbur, Chief of the Division of Vital Statistics of the Bureau of the Census, for the first annual meeting of the American Association for Study and Prevention of Infant Mortality, which will be held in Baltimore in November. The report of the committee on birth registration will be presented at the session on municipal, state and federal prevention, of which Dr. Wm. H. Welch is chairman. The members of the committee on birth registration include in addition to Dr. Wilbur:

Dr. Wilmer R. Batt, Commissioner of Vital Statistics, Harrisburg, Pa.

Dr. Charles V. Chapin, Commissioner of Health, Providence, R. I.

Dr. John S. Fulton, Secretary-General International Congress on Hygiene and Demography, Washington, D. C.

Dr. John N. Hurty, Secretary State Board of Health, Indianapolis, Ind.

Dr. Wm. C. Woodward, Health Officer, Washington, D. C.

Municipal, State and Federal Prevention.—Chairman, Dr. Wm. H. Welch, Johns Hopkins Medical School, Baltimore; Secretary, Dr. John S. Fulton, Secretary-General International Congress on Hygiene and Demography, Washington.

Medical Prevention.—Chairman, Dr. L. Emmett Holt, 14 West Fifty-fifth Street, New York City; Secretary, Dr. Philip Van Ingen, 125 East Seventy-first Street, New York City.

Educational Prevention.—Chairman, Dr. Helen C. Putnam, chairman of the committee to investigate the teaching of hygiene, appointed by the American Academy of Medicine, 1903, Providence, R. I.

Secretary, Prof. Abby L. Marlatt, Department of Home Economics, University of Wisconsin, Madison, Wisconsin.

Philanthropic Prevention.—Chairman, Dr. Hastings H. Hart, Director Department of Child-Helping, Russell Sage Foundation, 105 East Twenty-third Street, New York City. Secretary, Mr. Sherman C. Kingsley, Superintendent United Charities, Chicago, Ill.

Every section of the country is represented in the directorate.

For information or circulars write to the executive secretary, Gertrude B. Knipp, at the headquarters of the association in the Medical and Chirurgical Faculty Building, 1211 Cathedral Street, Baltimore, Md.

CORRESPONDENCE

Editor Ohio State Medical Journal, Columbus, Ohio.

Dear Doctor: The second annual meeting of the American Association of Clinical Research will be held in Boston on September 28 and 29, 1910.

Some very valuable contributions on researches in medicine and surgery, in prophylactic and anaphylactic medicine, in mental medicine, in radiotherapeutics, in metabolism, etc., are promised. There will also be a public meeting.

The cause of the association, to secure the true facts and principles of medicine and to advance medicine on the basis of truth and not of whim, is the cause of every true physician. Every physician is most cordially invited to become a member. Your support and that of your friends will be highly appreciated. Applications and program will be forwarded on request.

Fraternally yours,

JAMES KRAUSS, Secretary.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.

LOUIS A. LEVISON, M. D., Toledo.

BISMUTH PASTE IN UROLOGY.

This communication from the Paris Necker Hospital relates the application of Beck's bismuth paste in 10 cases of fistula resulting from removal of a tuberculous kidney and another of a fistula with a simple pyonephrosis with concretions. Nine articles on the use of the bismuth paste have been published in France. The paste used was a mixture of 10 parts bismuth with 10 parts each of paraffin and lanolin and 20 parts of vaselin. The amount injected was only from 5 to 10 or 12 c.c. except in a single case. In other points Beck's technic was followed and although such striking results as he has reported were never observed, yet on the whole the verdict is favorable. A cure was attained in some cases in which the process had proved rebellious to all other measures. The suppuration is materially reduced by the paste which renders it unnecessary to change the dressing as often as otherwise.—*Annales des Maladies des Org. Génito-urinaires*, Paris, June 1, 1910, via J. A. M. A.

THE RANGE OF ACTIVITY AND THE UN-TOWARD EFFECTS OF CERTAIN SPINAL ANALGESICS, BASED ON TWO THOUSAND ADMINISTRATIONS.

Dr. W. Wayne Babcock of Philadelphia said that the two thousand cases included all kinds of operations in all parts of the body. This kind of anesthesia should properly be called nerve-root anesthesia, rather than spinal, as it was the nerve roots which were affected. Its safety depended largely on the height of the nerve-roots which it was necessary to narcotize for any given operation. The higher up they were, the greater the danger. It was a true anesthesia that was produced, and not merely analgesia. The delicate thing was to have the solution sufficiently light to affect the sensory nerves, without affecting the motor ones. It could be made lighter by adding 10 per cent. of alcohol to 4 per cent. of solution. By regulating the position in which the patient was placed it was possible to arrest the anesthetic at any point of the spine desired. The speaker considered the doses used by Jonnesco as unnecessarily large, and said that the same results could be obtained from half the doses which he employed. In all operations in the upper part of the body it was necessary to be prepared to perform artificial respiration at any moment. It was not practicable to have the solution of the same spe-

cific gravity as that of the cerebro-spinal fluid. In the cases embraced in the report various anesthetic agents were employed.—*Medical Record*.

THE INJECTION TREATMENT OF HEMORRHOIDS.

Dawson (*The Antiseptic*, Feb., 1910), describes his technique as follows: The injection treatment is confined to uncomplicated internal piles, which can be returned to the bowel should they prolapse.

It requires no anesthetic.

It causes little or no pain.

There is no risk of life.

It does not necessitate confinement to bed.

The solution used with most satisfaction is a solution of carbolic acid in equal parts of glycerin or water to produce a solution of from 10% to 5%.

The piles are made to prolapse either by the finger or by the administration of an enema.

A hypodermic syringe fitted with a needle of good lumen is used. Into each pile 2 to 5 minims of the solution is injected. The piles are well anointed with vaseline and returned to the bowel. The patient is instructed that the piles must upon no account be allowed to prolapse, and replacement must be effected at once should they do so.

The immediate result is a rapid swelling. The effect of the method is to produce inflammatory thrombosis and fibrosis which ultimately subsides, so that the piles shrink and disappear. The patient should be kept in a state of constipation for forty-eight hours, after which the bowels should be relieved by castor oil or a saline aperient.

Throughout the course of treatment a 2% ointment of ferrous sulphate should be frequently and freely applied to the pile area, while the following mixture is taken three times a day:

Ferrous sulphate	3 grains
Magn. sulph.	25 grains
Acid sulph. dil.	10 minims
Inf. quassia, add.	1 drachm

—American Medicine.

POWDERED RHUBARB A VALUABLE APPLICATION FOR INDOLENT ULCER.

"The use of powdered rhubarb root as an external application for indolent ulcer was recorded so long as 1793 by Everard Home, assistant surgeon to St. George's Hospital, and the value of the remedy has been recorded again recently by

Sir Dyce Duckworth. A paraplegic patient, whose sacral bones were laid bare and who was much emaciated, came under his care. With a water-bed, good diet, and skilled nursing, gradual general improvement occurred, and signs of healing with more vigorous granulation began to appear in the sore. Charcoal poultices were employed at first; iodoform, various lotions, and resin ointment followed. Progress was very slow until powdered rhubarb was used at each dressing by freely dusting over the surface of the sore from a pepper-pot. The improvement was rapid and very marked. Benefit was also derived from pressure brought to bear by strappings of adhesive plaster from side to side of the concave sore. In a few weeks there was so much amendment that the wound was nearly closed, and the patient was fit to be removed from the hospital. * * *

One cannot answer for the aseptic qualities of the ordinary pulvis rhei of the Pharmacopœia, but one can be satisfied with its healing properties in cases of indolent ulceration. The astringency of rhubarb is probably due to the presence of tannic and gallic acid in it. In cases of painful (irritable) ulcers, Sir Everard Home added a fourth or eighth part of powdered opium to the rhubarb. This treatment, in the case of extensive ulcers, is alleged to have produced purging. No such effect occurred in the instances described above."—The Hospital, May 28, via Merck's Archives.

THE REPAIR OF VESICO-VAGINAL FISTULÆ FOLLOWING HYSTERECTOMY.

"Ward (Surg. Gynec. and Obs., July, 1910, p. 22), notes that the difficulty of dealing with this condition from the vagina can be overcome by the use of a male sound introduced through the urethra and used to force the inaccessible opening into reach. He then makes an incision over the urethra to the bladder wall. This incision is crossed by a second transversely and extending the width of the vaginal vault. The two incisions, thus made, have the fistula at their intersection. The dissection is begun at sufficient distance from the fistula so as to avoid adhesions in finding the cleavage between the vaginal wall and the bladder. A free dissection is then made and the opening in the bladder wall closed. After this the vaginal wall is closed separately, the bladder having been so displaced and held by suture that the lines of closure in the bladder and the vagina shall not lie one over the other. No originality is claimed for the method but the results have been so favorable that the method is deserving a trial before resorting to the superpubic route for the cure of this condition. The article is illustrated."

POSTURE USEFUL IN THE TREATMENT OF VARICOSE ULCERS.

Pool (Med. Rec., July 30, 1910, p. 192), describes the method in use at the New York Hospital Dispensary: "At the time of the dressings, three times a week, the patient is made to lie on the back on the examining table with both legs elevated almost to a right angle and supported against the wall; the patient lies in this position for about fifteen minutes. For the first few treatments massage is administered, stroking the limb toward the trunk. Before lowering the legs they are cleansed and dressed in an appropriate manner by strapping, medicinal applications, etc., and a muslin bandage is applied tightly and smoothly. The patient is instructed to resume this position three times a day for fifteen minutes each time, and at other times if the bandage feels too tight. No complaints have been made concerning the discomfort of the position and very few as to the tightness of the bandage. All the patients have expressed themselves from the outset as very much pleased with the results, stating that the legs are not only more comfortable, but show a more marked disposition to heal than by other methods.

By this method the engorgement of the veins and lymphatics is prevented and the edema diminished, as is evidenced by rapid diminution in the diameter of the legs after a brief period of treatment. Occlusion of the deep veins, of course, contraindicates the tight bandaging.

It must be emphasized that the method is intended to supplement and not as a substitute for other procedures. It will simply expedite the response of the tissues to curative agents. Appropriate local treatment must be as assiduously pursued as when this method is not followed. The only departure from the usual routine which is here suggested is the detail of elevation which seems to enhance the effect of the bandaging."

NERVOUS AND MENTAL DISTURBANCES OF THE MALE CLIMACTERIC.

(Archibald Church, Journal American Medical Association, July 23, 1910.)

Church endeavors to show that there is a monthly periodicity or rhythm in man which corresponds to the similar period in the female. Observations of others are cited showing variations in blood pressure, weight, and temperature in males in full harmony with the similar changes which occur during the menstrual period in the female. The manifestations of the male climacteric are somewhat indefinite but usually take the form of some nervous disturbance. Involutional insanity, the minor psychoses, and neurotic

disturbances may occur. On the physical side there is at the climacteric almost invariably loss of weight, a higher arterial tension, which latter condition cannot always be explained by age or the general physical condition. The gastrointestinal activities are reduced, so that indigestion and intestinal complaints are common. These patients show easy fatigue and some degree of general neurasthenia. Headaches, oppressed feelings in the chest, sudden sensations of an alarming nature, especially vertigoes, are commonly described. These conditions run a variable course of from eighteen months to three years, after which the patients regain a fair degree of their former mental and physical characteristics and go along comfortably, but with some reduction of their former capacity.

The management of these cases requires tact, judgment, and great patience. The general health should be built up by reduction of daily work, travel, and tonics. Vaso-dilators have seemed to do good. Any tendency to arterial sclerosis should be treated as required.

THE USE OF INTERNAL ALUMINUM SPLINTS IN THE TREATMENT OF FRACTURE.

Thomas (Med. Rec., July 9, 1910, p. 54) says that after trying several methods he prefers that "which makes use of steel screws and aluminum plates. Steel screws are used because they have given satisfaction and are easily procured. The principal objection to the common wood screw in bone work is that its thread is not continued throughout its length. Screws answering these requirements, however, may be obtained of Allen and Hanbury in London. On the other hand, if a screw be selected whose point extends into the cortex on the opposite side of the bone it will not fail to hold the splint securely.

Aluminum is the metal of choice for cleats because, while strong enough, it is easily worked into shape at the time of operation to suit any requirement. A piece of sheet metal of the proper thickness is selected and cut to an approximate shape with scissors. Three or four holes are bored in it with any sharp steel point and trimmed smoothly with a pocket knife and it is sterilized with the instruments.

Lane has multiplied the number of instruments for use in such cases and has devised steel plates of many shapes and sizes, but if aluminum be used it is easy to prepare it after the site of fracture is exposed and the particular requirement of the case becomes evident.

The great amount of trauma, necessary in exposing all sides of the fragments for some dis-

tance from the fracture, so as to drill through the bone or apply a splint in its cavity, is quite done away with when a plate or cleat is used to hold the fragments in place. In the latter case it is not necessary to expose much or strip any of the periosteum. It suffices merely to expose enough of the fragments so that the plate may rest against them, without injuring the periosteum more than to puncture it for the screw holes. The ends of the fragments are held in place with a stout hook or elevator slipped under that one which needs to be pulled into place while the plate is being applied. The periosteum may be included between the plate and bone without harm. Use a mechanic's wire gauge to measure the caliber of the screw which has been selected for use. Then a drill is selected two sizes smaller. This screw, when driven into the bone, will fit snugly and resist great force in attempting to dislodge it. With the plate lying in position, bridging the site of fracture, the drill is put through one of the holes in it and driven into the bone. A screw follows. With the plate now fastened in place as a guide the other holes are drilled in their proper places. The number of screws to be applied will depend upon the tendency of the fragments to become displaced, but there should be in all cases more than one screw on one side of the fracture. Otherwise, hinge motion will be allowed or the screws entirely dislodged."

Thomas does not find that the presence of the steel screws causes any trouble and as for infection, aluminum is antiseptic while the reduced trauma reduces the danger of infection.

TREATMENT FOR GONORRHEAL CYSTITIS.

Goelet (Amer. Med., June, 1910, p. 316,) gives the following treatment:

"Cystitis of gonorrhoeal origin yields promptly to irrigation with iodine solution. The strength of the solution used varies with the stage of the inflammatory action, as shown by the acuteness of the symptoms, from 15 to 30 m. to a dram, to the quart of warm water. In the acute stage I advise daily irrigation with warm boric acid solution to which an ounce or two of camphor water is added, with the administration of hexamethylenamine internally in doses of 5 to 7 grains every two hours together with a mild saline to empty the intestinal tract.

As soon as the very acute symptoms subside daily irrigation with the milder solution of iodine is commenced, and the strength of the solution is increased as tolerance is established. The patient is first made to empty the bladder before being

placed upon the table, then the urethra is further cleansed by irrigation with the iodine solution and the solution is projected into the bladder by elevating the reservoir sufficiently to overcome the sphincter action of the neck of the bladder. The tolerance of the patient is a fair guide to the amount of solution to be introduced, but it is not necessary to use more than three to six ounces. Distention of the bladder is unnecessary and inadvisable in these cases. If the patient cannot expel the solution in the recumbent position a catheter is inserted, the solution is withdrawn and a similar quantity is injected through the catheter which is then withdrawn and the solution allowed to remain until the next urination. In the beginning when the bladder is very sensitive this will be as soon as the patient gets on her feet. The action of the iodine solution is so prompt however that longer retention of the solution is not essential.

When there is involvement of the vagina or cervix uteri a tampon partially saturated with glycerine and iodine in the proportion of one dram of iodine to four ounces of glycerine is placed against the cervix and retained for twelve to twenty-four hours. * * * I have found nothing superior or even so good as hexamethylenamine given in doses of seven grains three to four times a day half an hour before meals and at bed time. Given in conjunction with some mild saline to promote free evacuation of the bowels and counteract the evil effects of intestinal toxemia it is an ideal remedy in these conditions. Of course the customary dietary restrictions are enforced.

LOUIS A. LEVISON, M. D.

ONE OF THE FUNCTIONS OF THE DUODENUM.

(S. A. Matthews, Journal American Medical Association, July 23, 1910.)

The observation that operations having to do with the pancreas, bile-ducts, and duodenum are associated with a high mortality lead Matthews to his experiments on the function of the duodenum. The deduction that can be drawn is that the duodenum exerts some influence, probably through the agency of a secretion, the removal of which from the body is incompatible with life (in dogs). So far as we know, Brunner's glands are the only structures located in the duodenum which might be capable of such a secretion. The crypts of Lieberkuhn might play a role, but in as much as they are found in the jejunum, this hardly seems probable. The fact that the fluid collected from a duodenal pouch differs little or not at all, from the ordinary intestinal juice, in

that it is a clear, thin, alkaline fluid, possessed of very feeble digestive powers, and when injected into the circulation in doses of from 10 to 20 c. c. exerts no effects at all, not even on the blood pressure, might suggest that it acts on some other secretion formed lower down in the bowel, forming an activated substance which is necessary for life. The fact that the animal always lives whenever the duodenal secretion is permitted to drain into the part of the bowel below, by means of an anastomosis of the jejunum into the duodenal pouch, or by a rubber tubing connecting the duodenal pouch with the intestines lower down, or by permitting the duodenal secretions to pass into the stomach and be discharged into the bowel with the stomach contents through a gastro-enterostomy, argues further for some such conclusion.

EPIDEMIC POLIOMYELITIS IN MONKEYS.

(Flexner and Lewis, Journal Experimental Medicine, Vol. XII, No. II, 1910.)

There has existed up to the present time, no convincing knowledge of the nature of the agent causing epidemic poliomyelitis. Since 1907, poliomyelitis has prevailed, during the summer months, as an epidemic in some parts of the United States. Flexner studied the cerebro-spinal fluid in 1907 in cases of poliomyelitis and showed that the lymphocytes were increased, the proteid was not markedly increased, and aerobic and anaerobic cultures were as a rule not successful. Flexner and Lewis chose the brain as the seat of inoculation through trephine openings, although the European investigators, Landsteiner, Popper, and Knoepfelmacher, who preceded Flexner and Lewis, chose the intraperineal method of inoculation. The injected matter consisted first of emulsions in salt solution of the spinal cord of children dead of poliomyelitis, and later of monkeys developing paralysis.

The clinical features of poliomyelitis are based on a study of eighty-one monkeys. The average incubation has been 9.82 days, but has varied from four to thirty-three days. There are no immediate effects from the inoculation until six to forty-eight hours preceding the paralysis, when the animals become nervous, excitable, a tremor develops, but with no rise in the temperature or diarrhoea. The paralysis usually develops suddenly, affecting any of the larger groups of muscles. The paralysis usually extends to the other muscle groups until death supervenes. One to six days elapse between the onset of paralysis and death. Sensory disturbances have been less satisfactorily noted. Anaesthesia and hyper-

aesthesia have occurred. The mental condition remains unaffected. The temperature is sub-normal.

Definite pathological lesions of the white matter were not made out. The gray matter was commonly altered. The chief lesions are oedema and punctate hemorrhages. The visible appearance was no measure of the damage done. Gross brain lesions have been rarely observed. The spinal fluid contains an excess of lymphocytes.

It has been shown that the infection can be transmitted not only by the intra-cerebral mode, but also by means of the blood, subcutis, peritoneum, spinal canal and large nerves. The blood contains the virus at the beginning of the infection. Most of the body tissues and fluids contain the virus.

Up to the present time, the nature of the virus has not been determined. Spinal cord extracts which have been filtered through Berkefeld filters regularly produce paralysis. It has been shown that the virus is not a filterable toxin, but a true virus or living micro-organism. The clear filtration fluid shows numerable bright, dancing points under the dark field microscope. Attempts to cultivate the virus artificially have been partially successful.

TRICHINOSIS.

(W. Gilman Thompson, American Journal Medical Sciences, August, 1910.)

Thompson has been able to obtain records of fifty-two sporadic cases of trichinosis occurring during the last six years, observed in his personal practice and in the service of his colleagues in the Presbyterian and Bellevue hospitals. He argues that this shows that trichinosis is not the rare disease, at least in the vicinity of New York, which it is supposed to be. There should be no difficulty in determining promptly a correct diagnosis based upon the observation of the following symptoms:

1. Acute onset usually with vomiting and abdominal cramps.
2. A high grade of eosinophilia, invariably present; usually above 30 per cent., and frequently much higher—even above 80 per cent.
3. A high grade of temperature, often reaching 104 or more, and lasting in lessening degree, for two to six weeks.

Puffiness of the eyelids and face, with pains in the eyes occurring in one-fourth of the cases.

5. Dyspnoea and diaphragmatic breathing occurring without cyanosis in about one-fourth of the cases.

6. The generalized muscular pains, cramps,

soreness, and prostration, causing sometimes deceptive apparent immobility.

7. The sudden occurrence of symmetrical circumscribed corneal hemorrhages in a patient whose blood vessels are not degenerated, should give rise to a suspicion of trichinosis.

BOOK REVIEWS

(Continued from page 505.)

and pathology of each. He does not confine himself to the pelvic organs, but even to the remote organs which may be in any way connected reflexly, physiologically or pathologically with the natural, unnatural functions or disturbances of the former.

By natural processes broader questions are introduced and discussed impartially. A great number of references are given, giving the views of a wide number of investigators of all nationalities—adding considerably to the general interest.

This book is of value to the general practitioner, enabling him to better treat a large class of his patients, to the gynecologist and obstetrician of course; to the nervous specialist and alienist, as well as to specialists in almost all departments of medicine.

PRESCRIPTION WRITING AND FORMULARY. By John M. Swan, M. D., Associate Professor of Clinical Medicine, Medico-Chirurgical College of Philadelphia. 32mo. of 185 pages. Philadelphia and London. W. B. Saunders Company, 1910. Flexible leather, \$1.25 net.

A very conveniently arranged *vade mecum* containing 1043 prescriptions for diseases arranged in alphabetical order for quick reference. It also contains sixty pages on the principles of prescription writing, official preparations, incompatibility, etc.

DISEASES OF CHILDREN. By Abraham Jacobi, M. D., L. L. D. Member American Medical Association, American Pediatric Society, Association of American Physicians, etc. An authorized translation from "Die Deutsche Klinik" under the general editorial supervision of Julius L. Salinger, M. D., with thirty-four illustrations in the text. Published by D. Appleton & Co., New York and London. 1910.

The above work receives a certain lustre from its association of Dr. Jacobi's name, and will doubtless be welcomed by his many admirers, who recognize his connection with any publication as a guarantee of a high degree of merit.

The scope and content of the book fulfill to a large degree the expectation of the reader. The

contributors have been well chosen and justify their selection by the excellence of their offerings. One cannot but note the customary absence of references to American authorities even to the ignoring of the use of the Flexner serum in cerebro-spinal meningitis—a curious oversight in a supposedly up-to-date book on pediatrics.

Its greatest worth will be as a reference work for the pediatricist, who really will find it invaluable.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M. D., Ph. D., L.L. D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Ninth revised edition. Octavo of 1326 pages, fully illustrated. Philadelphia and London. W. B. Saunders Company, 1909. Cloth, \$5.50 net; half morocco, \$7 net.

Previous editions of Anders "Practice of Medicine" have been reviewed in these columns, and the work is so favorably known as a general text-book that there is little more to say, save that this new edition has been revised with characteristic care by the author and brought quite up to date by the addition of the newer developments.

While of course the main parts of the book are but slightly altered, it is surprising in reading carefully to see how many changes may be noted; many minor, to be sure, but also many of considerable importance, such as Flexner's serum, the various tuberculin tests (including the ophthalmic test, we regret to say), a number of new signs and symptoms in diagnosis, etc. The diseases of the nervous system also have received especial attention in this revision.

Without doubt this new edition will continue the well deserved popularity of the work as a text-book.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA. FOR STUDENTS OF MEDICINE AND PHYSICIANS. By Joseph McFarland, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Sixth revised edition. Octavo of 709 pages, fully illustrated, a number in colors. Philadelphia and London. W. B. Saunders Company, 1909. Cloth, \$3.50 net.

The appearance of a sixth edition in thirteen years is an enviable achievement for an author, and shows the popularity of the work.

It is designed as a text-book for medical students and admirably fulfills its purpose. By

omitting the non-pathogenic bacteria much space is saved; the medical student is not interested in the non-pathogenic micro-organisms, and can learn the technique, etc., just as well, or better, from the former.

Part I is devoted to the general principles of bacteriology; the biology of bacteria, methods of observation, technique, culture media; animal experimentation, the differentiation of the various micro-organisms, and their classification for convenience of study from the habitat, i. e., bacteria of the soil, air, water and foods.

Part II considers specific diseases and their causative bacteria, their inter-relation, mode of entrance, methods of disease production, etc.

The work is quite comprehensive and thoroughly satisfactory; is well mounted and attractively illustrated.

HAND BOOK OF MODERN TREATMENT AND MEDICAL FORMULARY. A condensed and comprehensive manual of practical formulae and general remedial measures, compiled by W. B. Campbell, M. D., formerly Resident Physician at the M. E. Hospital of Philadelphia. Second revised edition. F. A. Davis & Co., publishers, Philadelphia, 1910.

A conveniently arranged little volume for rapid reference. It contains many long tried formulae which have proven their value, with numerous brief and practical suggestions as to modern medical treatment.

VITAL ECONOMY. By John H. Clarke, M. D. Cloth, price 50c net. A. Wessels Newold Publishing Company, 156 Fifth avenue, New York.

The author has the courage of his convictions, and does not hesitate to attack some of our pet theories in a way to cause the reader to pause and think. He emphasizes anew the fallacy of generalizing and *post hoc* reasoning that what is good for a few is good for all. It is difficult to pick out special chapters, but we were particularly struck with those on bathing, stimulants, worry and visiting the sick.

We heartily commend its perusal to every physician.

The painfulness of withdrawing packings that have dried in a wound may be avoided by soaking them with peroxide of hydrogen.—S. S.

Hot bricks or stones retain their heat much longer than hot-water bags.—S. S.

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKee, M. D., Collaborator.

The Clermont County Medical Society held its regular annual outing at the Boston fair grounds, August 3. A chicken dinner was served.

The Highland County Medical Society met Wednesday, July 6, 1910, at Hillsboro. Program was as follows: "Aseptic Obstetrics," W. W. Glenn, Hillsboro; "Anaesthesia with Demonstrations of the Newer Instruments," F. H. McMechan, Cincinnati, Ohio; "Serum Diagnosis of Syphilis," Oscar Berghausen, Cincinnati, Ohio.

Response to a toast, "The Old Doctor," by Dr. Wm. Scott, at the outing and dinner of the Clermont County Medical Society in honor of Dr. Philip Kennedy, the oldest member of the society, June 29, 1910:

Gentlemen of the Clermont County Medical Society: I am glad to be able to respond to your invitation to be present today. I appreciate the honor of joining with you, in paying tribute to this old patriarch and venerable physician.

Seventeen years ago last month, I first attended a meeting of your society, held at Batavia. There I first met our host of today, Dr. Kennedy. Although he was then an old man, it did not require a very extensive observation to convince one that he was full of vim and vigor. He had the books of the society under his arm, he was familiar with every detail of the business of the meeting, and he commanded the respect and attention of all present.

It has been my privilege to meet him at several meetings of the society since, and I come to look upon him as a kind of a barometer, whenever he was present, the indications were for a mighty good meeting. I never lost my respect for him but once; then he owned a horse that I wanted, and he refused to let me have it. There are two classes of men that I never met without a feeling that I ought to take off my hat and pay them reverence. They are the old war veteran, and the old doctor. To me they are sublime—almost sacred—we today are citizens of the grandest country under the sun, we bow to no empire-kingdom or nation, we point with pride to our flag, with its 46 stars; under its folds we feel safe and secure, our government is unsurpassed.

During the last few decades the advancement made by the medical profession has been so great

that it seems that perfection has almost been obtained. The old soldier did not develop our country to its present standing, neither did he establish our present government, but what he did, years ago, in removing obstacles and establishing new lines, made our present country and government possible. The old doctor cannot claim credit for the present standing of the medical profession, but he cleared the way, and established rudimentary foundations, on which the profession of today has builded.

It strikes one with awe, to stop and consider the hardships and handicaps to which the old doctor was subjected, and we wonder how the results and progress obtained by him were possible.

For example: His diagnosis was made by the touch and brain alone. Such aids as the clinical thermometer, stethoscope, microscope, X-ray, blood count, Widal test, opsonic index, and the various serums and cultures were unknown. In the treatment of diseases he had to prepare his own remedies, often from the crude state. No trained nurse shared his work and responsibilities. Of antiseptics and antitoxines no one dreamed. No hypodermic syringe simplified his medication. No Esmarch bandage, hemostatic forceps or adrenalin ever helped him control a hemorrhage; laudable pus, the horror of the surgeon of today, was to him an omen favorable to prognosis. His text books, standard for the time, were misleading in both diagnosis and treatment. A short time ago I came in possession of a set of medical text books that were published in 1848. They were standard works, written by men of wide reputation. These books were the guides for Dr. Kennedy and the physicians of the '50's and early '60's. From these books I have made two or three extracts. The treatment of typhoid fever is given as follows: Bleeding— withdrawing from the arm 8-12 or 16 ounces of blood; this to prevent local or disorganizing inflammation. Diphtheria, as we know the disease, was called "membranous angina." The author states that a new name, diphthritus, derived from the Greek word, which means skin or hide, is coming into use. In the treatment of this disease, bleeding is not recommended, except very cautiously, because it has been shown that bleeding does not disintegrate the membrane. Mercury is recommended to be given until complete salivation is produced. Solid nitrate of silver, or mercuric acid should be applied to the throat. One notation in surgery: The after treatment of amputation of the leg—"The stump should be supported

on a pillow, and covered with a cloth dipped in cold water. The discharges should be wiped from the wound occasionally, and the ligatures withdrawn as they become loosened, cicatrization should be encouraged by the application of nitrate of silver or other stimulants. Thus the "Old Doctor" worked, often miles from home, his nearest associates, so far away, that distance denied him help and counsel. Alone with his God, he assumed all the responsibilities, and he alone was called to account.

If any of the younger physicians present are loth to grant Dr. Kennedy and his old associates credit, just lay aside your thermometer, X-ray, microscope, hypodermic syringe, your various cultures and antitoxines, and your nice pharmaceutical preparations. Go out amongst your patients, and try it a week, and you will come back, ready to pronounce Dr. Kennedy and his old associates giants and heroes. The calling of the physician of today is a pleasant one, moreover his longevity of life is increasing. Only a few years ago both life and accident insurance companies, considered the doctor a more hazardous risk, than the trainman on the railroads. The recent statistics of the death rate of all physicians, dying within a stated period, give the average age at death as 60 5/10 years.

Now Dr. Kennedy, it is neither appropriate nor necessary for me to take time or use words to say to you that we, your fellow associates and physicians, honor you highly. Our very presence here should be sufficient evidence of that fact. May we meet you many times again, and spend the time as happily as we have today. May many years of happiness and usefulness be granted you, and in your declining years may all your ways be ways of pleasantness, and all your paths be paths of peace, and when the summons come "'tis enough, come to your reward," may your sun set in a cloudless sky. God bless you.

FOURTH DISTRICT

TODD DUNCAN, M. D., Collaborator.

The Putnam County Medical Society held its annual meeting at Kalida, Ohio, August 4. The program was as follows: Report and exhibit of clinical cases. Contribution of papers for next meeting: "Acute Nephritis," J. F. Ockuly, Ottoville; "Diphtheria," J. F. George, Ft. Jennings; "Gastric Ulcer," E. L. Deuble, Miller City; "Cardiac Tonics," G. S. Wilcox, Col. Grove; "Cholera Infantum," E. A. Ballmer, Col. Grove; "Septic Peritonitis," E. P. Lemley, Vaughnsville.

The subjects were all well discussed. The at-

tendance was good and in addition to the regular members Drs. John G. Keller, J. H. Jacobson, L. A. Levison and A. L. Steinfeld, all of Toledo, were present.

FIFTH DISTRICT

H. G. SLOAN, M. D., Collaborator.

The July meeting of the Erie County Medical Society was held at Ruggel's Grove, on Lake Erie. P. F. Southwick read a paper on "Grave's Disease," and J. P. Esch one on "Treatment of Chronic Diarrhoea." After the program a dinner was served.

SIXTH DISTRICT

A. J. MARCH, M. D., Collaborator.

The one hundred and fifty-first session of the Union Medical Association of the Sixth Councilor District was held in Canton, O., on August 9, 1910. President J. F. Marchand presided. The meeting was well attended and unusual interest was manifest throughout both sessions. Dr. R. E. Skeel, President of the Ohio State Medical Association, was with us at the opening, and gave an inspiring talk. He pointed out what a live County Society can do toward building up and maintaining a strong State organization. He emphasized the work of the Public Policy and Legislative Committees, but more especially what can be done through the Publicity Committees in disseminating prophylactic information, and what will help to bring about a better understanding between the laity and the profession.

Dr. L. A. Buchman, Canton, read a paper on "Vaccine Therapy in the Treatment of Gonococcus Infections."

ABSTRACT.

There is no doubt as to the value of gonococcus vaccine in the treatment of gonococci infections and their complications.

Get better results from stock bacterins than in other infections.

Important in many cases to use local treatment in conjunction with vaccine in order to get the best results.

Best results were obtained in orchitis and arthritis.

Vaccine an important factor in effecting a permanent cure.

Little danger in the use of vaccine if begun with small doses and gradually increased.

A vigorous discussion followed by Drs. DeWitt, Welch, Fraunfelder, Ryall, Zinninger, Stern, and March.

Dr. George M. Logan, Akron, read a scientific paper on "The Sero-Diagnosis of Syphilis."

ABSTRACT.

He explained that the reaction bearing the names of Wassermann, Noguchi, and others depended upon the failure of hemolysis of the red corpuscles used in combination with serum from syphilitic patients, fresh guinea-pig's serum, serum from human-immunized rabbits, and alcoholic extract of liver of syphilitic foetus rich in the spirochaete pallida.

The technic of making the test according to Noguchi's method was reviewed briefly, and the fact that the test can be made by careful laboratory workers and be of great and practical value to general practitioners was emphasized.

Besides using the test in conjunction with the usual clinical signs in arriving at a diagnosis in obscure cases in which the diagnosis of syphilis must be confirmed or eliminated, it is found of value in the following classes of cases:

(1) In those cases which come to the physician late in their infection with a very indefinite history of a possible syphilitic infection in which a positive diagnosis cannot be made from the history or from the clinical signs.

(2) That large group of undoubted syphilitic cases with no apparent symptoms but in which the physician has every reason to believe have been inefficiently treated early in their infection and may be in danger of a recurrence or of parasyphilitic affection.

(3) Those cases in which the anti-syphilitic treatment was instituted on diagnosis of suspected primary lesion in which secondary lesion in which secondary lesions never developed and syphilis may be doubted. A negative reaction in those cases after anti-syphilitic treatment had been discontinued a few weeks would assure both physician and patient full course of treatment not necessary.

(4) In aiding in arriving at a diagnosis in suspected early cases of parasyphilitic affections in which positive diagnosis cannot be made from history or from clinical signs.

(5) In advising former victims of syphilis, who have thought to have taken thorough course of treatment, regarding marital relations.

No discussion. The members preferring to take the essayist at his word and meditate on his production which he worked out so well. N. W. Culbertson, Massillon, read a paper on "Ectopic Pregnancies." He covered the field in a clear and comprehensive manner. H. J. Stoll, Wooster, gave a paper on "Tubercular Peritonitis," which aroused great interest and discussion. He emphasized the importance of first having a positive diagnosis of tuberculosis before operating; after operation keep up anti-tubercular treatment; according to high authority the cure is due to the excessive hyperemia and leucocytosis which follows the operation. Discussion: Dr. Walker

asked whether entrance of air to the cavity or the saline washing had anything to do with the cure. Dr. Stern: We can always rely on the use of tuberculin where we suspect tuberculosis. If you get positive skin and eye reaction you are warranted in your diagnosis of tuberculosis. Dr. DeWitt thinks surgery does not cure these cases. Says the greatest bane to tubercular patients is fear and worry, and in the operation hope is held out to them, therefore the effect is more psychic than real. Dr. Welch believes there is no psychic effect whatever. Dr. Ryall holds that the opening of the abdomen, working with the viscera, and removing the infected areas all help to bring about a cure.

W. D. Deuschle, Columbus, one of the invited guests read a very helpful and practical paper on the "Significance of Changes in the Reflexes." Ben R. McClellan, Xenia, another invited guest, gave a paper which was full of wholesome advice along ethical lines, duty of physicians to the public, and his obligations to his patients.

Councilor Miller urged upon the County Societies to make up good reports of their meetings and send them to the JOURNAL for publication. In this way we will know that they are alive.

The next meeting of the Sixth District will be held in Youngstown on the second Tuesday in November.

SEVENTH DISTRICT

S. O. BARKHURST, M. D., Collaborator.

The August meeting of the Tuscarawas County Medical Society was the annual outing of the society for the year 1910. Dr. Floyd of Steubenville and Drs. Carr, Lower and Yarnell of Coshocton were visitors. About fifty members and their families were present.

EIGHTH DISTRICT

J. R. McDOWELL, M. D., Collaborator.

At the last meeting of the Muskingum County Medical Society D. J. Mathews, Zanesville, presented a paper on "Cholelithiasis." The rest of the evening was taken up in the discussion of the paper and of the following resolution:

Whereas, We, the Muskingum County Medical Society, deem it inadvisable and harmful to in any way modify the present "Medical Practice Act," therefore, be it.

Resolved, That we unanimously request our successful candidates for the State Legislature, that they oppose any movement to in any way interfere with existing laws.

The above resolution was passed and the secretary instructed to send a copy to each candi-

date for the State Legislature, in order that they might know the attitude of the physicians, before their election.

NINTH DISTRICT

S. P. FETTER, M. D., Collaborator.

The Pike County Medical Society held their regular monthly meeting at the office of Dr. O. C. Andre. Harry Brown of Chillicothe read a very interesting paper on "Pyelonephritis; a Complication of Pregnancy," followed by a general discussion. H. T. McCann delivered an address on "Medical Ethics" which was appreciated by all.

NEWS NOTES

THE AMERICAN HOSPITAL ASSOCIATION.

The Twelfth Annual Conference of the American Hospital Association will be held at the Planters Hotel, St. Louis, September 20, 21, 22 and 23.

The special committees will report on subjects of unusual interest at this meeting. The Special Committee on The Education and Training of Nurse Assistants for the Care of People of Limited Means in their Homes and the Nursing of Patients Suffering from Chronic Diseases will make a report which will be of interest to hospital workers and physicians in general. The report of the Special Committee on Bureau of Hospital Information and permanent Secretaryship will deal with the advisability of establishing a permanent headquarters or office for the Association.

Members who desire to have any moot questions on hospital affairs discussed at the convention will please draw up the questions and mail to Dr. R. W. Bruce Smith, Parliament Building, Toronto, Ont.

"Relationship of Trustees to Superintendent"—Dr. Henry M. Hurd, Johns Hopkins Hospital, Baltimore, Md.

"Private Rooms in General Hospitals"—Dr. C. Irving Fisher, Presbyterian Hospital, New York City.

"The Training of Hospital Superintendents and Heads of Departments"—Dr. F. A. Washburn, Supt., Mass. General Hospital, Boston, Mass.

"Cooperation vs. Individualism in the Care of the Sick." Mr. Bailey B. Burritt, Secretary State Charities Aid Association, New York City.

"Preparation and Use of Detailed Reports for Smaller Hospitals"—Mr. Walter Mucklow, Director St. Luke's Hospital, Jacksonville, Fla.

"The Education of the Nurse in America"—Dr.

Richard O. Beard, Secretary, University of Minneapolis, Hospital, Minneapolis, Minn.

"The Hospital as a Commercial Factor"—Mr. Del T. Sutton, Editor, International Hospital Record, Detroit, Mich.

"Methods of Raising Funds for a General Hospital"—Miss Lucia L. Jaquith, Superintendent, Memorial Hospital, Worcester, Mass.

"Hospital Construction in St. Louis"—Dr. Wayne Smith, Superintendent, University Hospital, St. Louis, Mo.

Report of Special Committee on Education and Training of Nurse Assistants for the Care of People of Limited Means in their Homes and the Nursing of Patients Suffering from Chronic Diseases. Committee: F. A. Washburn, M. D.; Miss Mary Riddle; Chas. H. Young, M. D.

Report of Special Committee on Bureau of Hospital Information and Permanent Secretaryship. Committee: Dr. S. S. Goldwater, Mt. Sinai Hospital, New York City; Dr. Henry M. Hurd, Johns Hopkins Hospital, Baltimore, Md.; Dr. P. E. Truesdale, Truesdale Hospital, Fall River, Mass.

Report of Committee on Hospital Efficiency, Hospital Finances and Economies of Administration—Winford H. Smith, M. D., Bellevue and Allied Hospitals, New York City.

Report of Committee on Hospital Construction—H. E. Webster, Royal Victoria Hospital, Montreal, Que.

Report of Committee on Uniform Accounting—C. Irving Fisher, Presbyterian Hospital, New York City.

Question Box. Chairman: Dr. R. W. Bruce Smith, Parliament Building, Toronto, Ont.

Carrie Chase Davis, who has been practicing at Sandusky for twelve years, has moved to Washington, D. C. For the past five years Dr. Davis has been secretary of the Erie County Medical Society.

F. M. Shook, medical corps, United States navy, has been detailed to conduct lecture and laboratory courses at the New York Post-Graduate Medical School during the months of August and September.

The ninth international conference of the Red Cross will be held in Washington, D. C., in May, 1912, Red Cross endowment fund committees of prominent men have recently been appointed in Chicago, St. Louis, Cincinnati and Washington by

President Taft, and effort will be made to raise a fund of \$2,000,000 for the American Red Cross.

Harley O. Bratton, M. D., desires to announce his practice limited to diseases and surgery of the genito-urinary system, 112 East Broad street, Columbus, Ohio.

Councilor Sylvester of Wellston is being widely noticed for his remarks on the suggestion that the candidates for nomination to succeed A. R. Johnson as congressman from his district defray the expenses of the primary.

He is quoted as follows:

"To hold a primary in which the candidates defray the expenses would be equivalent to awarding the seat to the highest bidder, as the nomination means the election, and it is my opinion that the congressional committee will never allow itself to become a party to such an infamous proceeding. There is no law for such a primary in the first place, and it would necessarily be informal."

The following program for the next series of Harvey lectures has been arranged:

October 15.—Prof. D. H. Chiari of Strassburg, Germany, on "Die Bedeutung der pathologischen Autopsie und sonstiger pathologisch-anatomischen Untersuchungen."

November 12.—Prof. W. E. Castle of Harvard University, on "Unit Characters in Heredity."

December 10.—Prof. Harvey Cushing of Johns Hopkins University, on "Certain Clinical Aspects of Dyspuitarism."

January 14.—Prof. Arthur R. Cushny of the University of London.

February 4.—Dr. Thomas B. Osborne of the Connecticut Agricultural Experiment Station, New Haven, on "The Chemistry of the Proteins."

February 25.—Prof. Jacques Loeb of the Rockefeller Institute for Medical Research.

March 18.—Prof. H. Gideon Wells of the University of Chicago.

These lectures are open to the public and are given on Saturday evenings at the New York Academy of Medicine.

The corner-stone of the Peter the Great Hospital was laid at St. Petersburg last month. It is to be the largest hospital in Russia, with thirty-seven

separate buildings, and is expected to cost over \$10,000,000.

Director Orr of the Cleveland public schools has announced that the drinking cup has been abolished in all the schools of Cleveland and that the sanitary drinking fountains will be used in the future.

On account of the fact that every hospital in the city of Cleveland has been filled with sick babies, open-air wards have been established on the Andrews lawn, Euclid Avenue and Thirtieth Street, at the babies' dispensary, where twenty-six sick babies can be cared for.

By a recent decision of the Ohio courts the state board cannot compel applicants for medical certificates to go to Columbus, the state capital, for examination, but the board must conduct them in all large cities. The board held an examination in Cincinnati July 19, the first held outside of the state capital, when twenty-two applicants took the examination.

At a meeting of the Ohio State Medical Board, July 5, it was decided to withdraw recognition from any Ohio medical college which did not require of every matriculant a certificate of admission issued by the entrance examiner of the board. It was further decided that all colleges should file with the secretary of the board a complete list of matriculants on or before November 15 of each year. Dr. G. H. Matson, the secretary, says that the above ruling is to insure that a proper preliminary education has been secured before the medical course is begun, since the latter is now too exacting to permit of secondary studies being taken at the same time.

The following letter was recently mailed to each auxiliary committeeman of the State, but every individual member should take just as much interest in this subject and cooperate with the committee in every way possible. Now is the time to make our influence felt:

7 E. Second St., Xenia, O.

Dear Doctor: The State Committee on Public Policy and Legislation is formulating its plans for the year's work. You are the Auxiliary Committeeman for your county. We want you to be in touch with our plans, and therefore call your attention to the program as now mapped out.

We have decided to ask the candidates for Con-

gress to promise their support; first, to the Owens Bill or one similar thereto, providing for a National Department of Public Health; second, to the Dodds Bill, providing for classification of medical journals as second-class matter for mailing purposes.

We have also decided to ask candidates for both houses of our State Legislature to pledge themselves; first, to favor an amendment to the present law providing for the inspection of school children; second, to oppose all laws threatening the integrity of the Medical Practice Act, particularly the Optometry Bill and the Christian Science Bill; third, to support a bill providing for the sterilization of criminals and the criminal insane.

In furtherance of this, we ask you to cooperate with us, and wherever possible, to secure letters from candidates of both parties, stating their views upon the questions involved, and to forward such letters or copies thereof, to this office.

Be kind enough also, to furnish us with the name of the family physician of each candidate for all legislative offices, Federal and State, residing in your county.

We await eagerly your reply.

With the very best wishes, yours sincerely,
Ben R. McClellan,
Chairman of Committee.

MARRIAGES

Edwin W. Enz, to Miss Aneitz Perry, both of Cincinnati, June 29.

Ware McMillin, Cincinnati, to Miss Marion Thayer Ashton, of Oxford, July 15.

Oscar R. Micklethwait of Portsmouth, to Miss Laura Allen of Jackson, recently.

George Gill, to Miss Adele H. Bassett, both of Elyria, July 25.

The annual meeting of the Pennsylvania State Medical Association will be held in Pittsburg, October 3 to 6. This will be an excellent opportunity for many of our members, especially in the eastern part of the state to visit our neighbors and compare notes. The program is an excellent one, and promises a very interesting and instructive session.

DEATHS

C. E. Shummard, Cincinnati College of Medicine and Surgery, 1891; died at his home in Venice, August 2, from angina pectoris, aged 48.

John H. Whitehead, Cleveland Homeopathic College, 1874; died at his home in Bowling Green August 6, from diabetes, aged 69.

J. J. Bower, Eclectic Medical Institute, Cincinnati. 1869; died at his home in Coshocton, Ohio, July 30, from paralysis, aged 71.

Perry M. Welker, Eclectic Medical Institute, Cincinnati. 1875; died suddenly in his stateroom on the steamer Mackinac while on his way to Petoskey, Michigan, July 27, from heart disease, aged 58.

Leander S. Porter, Homeopathic Hospital College, Cleveland, 1880, of Port Clinton; died at Dayton, July 26, aged 50.

David W. Henderson, Starling Medical College, Columbus, 1852; died at his home in Marysville, July 23, from paralysis, aged 87.

Oscar F. Edwards, Eclectic Medical Institute, Cincinnati, 1864; died at his home in New Lebanon, July 8, from dropsy and heart disease, aged 74.

William D. Cole, Eclectic Medical Institute, Cincinnati, 1879; died at his home in Ansonia, July 8, from paralysis, aged 63.

Daniel Watt Copeland, M. D., Starling Medical College, Columbus, O. Served one year in medical department of U. S. Army during the Spanish-American War. Served three years in medical department of U. S. Navy; died at his home in Somerton, O., August 23, from autointoxication, aged 40.

HYPERCHLORHYDRIA AND ABDOMINAL AND PELVIC SURGERY.

J. H. Carstens, Detroit, Mich., believes that hyperchlorhydria is a symptom, not a disease, and differs in each individual; it is most frequently caused by reflex action, probably due to some irritation of the sympathetic nervous system. Persistent hyperchlorhydria should be cleared up by an exploratory abdominal incision, and the cause, if possible, removed by surgical means. The author reports seven cases in which surgical operations for gallstones and other troubles caused hyperchlorhydria to cease. Adhesions in the peritoneum which interfere with peristalsis cause irritation of the solar plexus.—Medical Record, August 20, 1910.

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ORIGINAL ARTICLES

CIRCULATORY CHANGES IN EXOPHTHALMIC GOITRE.

ALBION WALTER HEWLETT, M. D.
Ann Arbor, Mich. Professor of Internal Medicine, University of Michigan.

[Read before the Ohio State Medical Association.]

One of the most difficult problems in the diagnosis of cardiac disease is the differentiation of the so-called neuroses from those functional disturbances which may in time lead to actual insufficiency of the heart muscle. And yet such a differentiation is of great practical importance if we are to give a prognosis in a given case. Similar etiological factors may produce symptoms which closely resemble one another and yet differ in their tendency to induce permanent damage. For example, the symptoms produced by the abuse of tea, coffee and tobacco, as well as those which occur in exophthalmic goitre have many features in common with the cardiac neuroses. The rapid heart action, the sudden forceful apex beat, the sense of palpitation, the bounding pulse, and the warm and moist extremities are common to all these conditions; and it may be difficult to decide whether a given patient is suffering from a pure neurosis, a mild Graves' disease, or from the abuse of tea, coffee, or tobacco. In Graves' disease, however, there is a tendency toward a serious or permanent damage of the function of the heart and one of the most interesting features of the study of the cardiovascular changes in this disease is the comparison with the neuroses on the one side and with the organic heart diseases on the other. During the past year and a half fifteen well-marked cases of exophthalmic goitre have been studied in the

medical clinic of the University of Michigan Hospital. Although this number is small, the care taken in the study of the cardiovascular changes will perhaps justify a brief report of some of the findings.

Goitres may affect the circulation in two ways. The first is by the pressure of the tumor in the neck upon the neighboring veins, nerves, or air passages. The second is through the action of toxic substances produced by the diseased thyroid, the so-called thyreotoxic changes. I shall not attempt to differentiate these etiological factors in our cases, but would say that in several patients at least the enlargement of the thyroid gland seemed insufficient to act mechanically.

Our cases fall into two distinct classes: those with regular and those with irregular hearts. The latter presented such fundamental differences that a separate consideration seems necessary. In the first group there were ten cases. These have been arranged on the chart according to the pulse rate, which is one of the best criteria of the severity of the condition. In my experience as in that of others¹ a persistently high rate while the patient is at rest in bed is rare in pure neuroses and should always awaken a suspicion of Graves' disease or of serious cardiac weakness. The apex beat in exophthalmic goitre is usually forcible, sudden, and rather diffuse, resembling that seen in nervous individuals who are suffering from palpitation. This forceful and diffuse beat is apt to lead to error in judging the size of the heart, for such a beat can be felt farther to the left than where the impulse is less forcible without there being any change in the actual cardiac outlines. Percussion, however, frequently shows an enlarged area of cardiac dullness and both A. Kocher² and Dock³ found such an enlargement in

about one-half of their cases. The uncertainties attending percussion render examination by more accurate methods advisable and we have used the orthodiagraph for this purpose. The figures in the column next to the last of the chart show the areas of the heart shadows thus obtained while those in the last column show the average sizes of the heart shadows of normal individuals of approximately the same weight according to Dietlen's standards. It will be seen that the heart shadows of the patients with exophthalmic goitre bore no definite relation to Dietlen's averages, there being about as many above the standard as there were below. A number of factors enter into the question of how these results are to be reconciled with the frequently expressed opinion that the heart is enlarged in exophthalmic goitre. In the first place, Dr. Van Zwaluwenburg, to whom I am indebted for these orthodiagraph figures, finds that the areas of the hearts examined in the medical clinic at the University of Michigan are smaller than the corresponding figures given by Dietlen, due perhaps to differences in race, occupation, or position in which the orthodiagraph was taken. In the second place the cardiac outlines represent the size of the heart in diastole and the tachycardia of exophthalmic goitre by lessening the diastolic pause will lessen the apparent size of the heart. Finally the heart in exophthalmic goitre often occupies a transverse position which increases its transverse measurements without necessarily affecting the total surface presented to the chest wall. The orthodiagraph figures do not, therefore, support the assertion that the heart is usually enlarged in exophthalmic goitre, though it is possible that the discrepancies will be cleared away when further studies of normal orthodiagraphs have been made.

Heart murmurs are extremely common in exophthalmic goitre, occurring in about two-thirds of the cases reported by A. Kocher and by Dock, and in eight of the ten cases with regular heart action. They are nearly always systolic in time and may be loudest over the apex or base of the heart, usually suggesting the so-called accidental murmurs. In some cases, however, the loud systolic murmur at the apex, the accentuated second pulmonic sound and the enlargement of the heart suggest a muscular or valvular insufficiency of the mitral orifice.

The blood pressure has been studied by Spiethoff,⁴ by Morris and Edmunds,⁵ and by others, and while no constant rule prevails in this disease, there is a noticeable tendency toward a moderate increase in the systolic pressure of 125 mm. of

mercury and one showed pressures which frequently exceeded 155 mm. of mercury.

The dilation of certain vascular areas is one of the most striking features of exophthalmic goitre. The vessels of the thyroid are especially affected, which is evidenced by the pulsations of the gland, the thrills and murmurs heard over it, and the profuse bleeding which may occur at operation. There is also evidence of vascular dilation in other parts of the body. The peripheral pulse is unusually large and soft, with a marked diastolic wave, characteristics which seem to indicate a loss of arterial tone,⁶ the abdominal aorta frequently throbs violently and abnormal pulsations in the retinal vessels and even in the spleen have been described.⁷ The dilation of the peripheral vessels has been shown especially by recent studies on the rate of blood flow in the arm.⁸ In normal individuals under ordinary conditions this rate usually lies between 2 and 5 cc. of blood flow per 100 cc. of arm substance per minute. It is apt to be increased in neurasthenics or in those who have warm, moist skins. In exophthalmic goitre, however, it reaches its maximum and, as will be seen from the chart, it did not fall below a rate of 7cc. and frequently exceeded 15 cc. Such excessive rates as these last have been encountered in no conditions other than exophthalmic goitre and exposure of the body to heat. This rapid flow of blood undoubtedly occurs in all the peripheral vessels of the body and it accounts for the warm skin so common in exophthalmic goitre. It is due to a general peripheral vasodilatation. The increased heat production which occurs so frequently in the more severe types of the disease necessitates an increased heat elimination and this seems to be accomplished, in part at least, by a greater peripheral blood flow with greater losses of heat from the skin. We know little about the rate of flow in the internal organs; yet the violent pulsations of the abdominal aorta and the abnormal pulse sometimes present in the retinal vessels and in the spleen suggest that here, too, the rate of flow may be increased. Examination with the fluoroscope often shows an increase in the movements of the left border of the heart, which may be due in part to an increase in the amount of blood expelled at each stroke. We see, therefore, that there is some indirect evidence of a heightened flow of blood throughout the body. Plesch,⁹ who has used a new method for determining the general rate of blood flow, found but a slight increase in three patients with exophthalmic goitre. His cases, however, did not seem to be particularly severe, and as his method has not

as yet been generally accepted, the results are not conclusive.

Five of our cases have been grouped together on account of the irregular heart action. Arrhythmias appear to have been particularly common in this series, for Murray¹⁰ mentions but twelve among his 180 cases and A. Kocher mentions but four among fifty-nine cases. In all of my cases the irregularity has been of the permanently irregular type, with absolutely disordered rhythm and with a disappearance of the auricular waves from the venous tracings.¹¹ This form of irregularity affects the prognosis most unfavorably. Two of these five cases were operated upon. One died shortly after the operation, and the other, though relieved to some extent of his nervous symptoms, continued to suffer from his cardiac insufficiency. Operation was not advised on the three others because of the cardiac insufficiency. In most of these cases the heart was decidedly enlarged and the peripheral blood flow not so fast as in some of these with regular heart action. In this group of patients blood pressure readings are practically valueless on account of the irregularities in the force of the pulse.

Of the mechanism by which the heart is affected in exophthalmic goitre we know little. Aside from the mechanical effect of the tumor in the neck, we have to deal with a toxic action of the diseased thyroid. The eye signs have been attributed to a stimulation of the cervical sympathetic and a similar stimulation of the sympathetic nerves leading to the heart may account for the tachycardia and some other heart symptoms. The blood of these patients shows unusual quantities of a substance which gives the vital reactions for adrenalin, and some of the cardiovascular changes may be due to this substance. The permanently irregularly heart action which represents the most serious cardiac complication of exophthalmic goitre seems to be due to changes in the heart muscle.

A review of our cases shows the gradual gradation from those changes which resemble the cardiac neuroses to those which indicate cardiac disability. On the one hand we have the sudden forceful apex beat, the throbbing arteries, and the peripheral vasodilation; on the other we have the occasional cardiac enlargement, the murmurs suggesting mitral insufficiency, and the permanently irregular heart action. A recovery from the milder symptoms is certainly possible, and the pulse rate usually lessens in proportion to the improvement. The enlargement of the

heart may also lessen and in one of our patients the orthodiagraph showed a distinct diminution in the cardiac shadow along with a very marked improvement of symptoms. Murmurs due to muscular insufficiency of the mitral ring may also disappear. When the heart has once become permanently irregular, however, there seems little prospect of complete recovery, and this seems to be the most serious of all the ordinary cardiac complications of a chronic character.

Chart 1.

Name	Pulse Rate	Blood Pressure	Rate of Blood Flow in Arm	Area of Orthodiagraph	Normal Area (Dietlen)
Pay.	120-150	130-150	15	104.5	94
Gee.	118-154	133	7.5	79.0	94
Lu.	115-135	120-145	17.5	84.3	94
Bias.	110-130	140-160	18	121.1	104
Mc.L.	100-130	135	20	136.5	131
Ha.	112-120	...	7.0	85	94
Vdl.	100-120	115-133	12	94.8	104
Sag.	100-120	120	8	66	92
Whit.	90-120	123	10	135.2	111
Coo.	90-115	115	8	103.1	114
Permanently Irregular Hearts.					
Carb.	120-160	138
Gill.	115-145	96-138	8	155.4	131
Wess.	120-140	130-
Mill.	130	135-155	...	91	109
Fig.	88-100	115	10

1. Müller, Fr.—Nervous Affections of the Heart, Arch. Int. Med., 1908, i, 1.

2. Kocher, A.—Ueber Morbus Basedowii. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1902, ix, 1.

3. Dock, G.—Am. Med., 1906, xi, 271.

4. Spiethoff.—Blutdruckmessungen bei Morbus Basedow, Zentralbl. f. in Med., 1902, xxiii, 849.

5. Morris and Edmunds—Observations on the Blood Pressure in Disease, Medical News, 1905, lxxxvi, 62.

6. Kraus, R.—Ueber das Kropfherz. Wien. klin., Wochenschr, xii, 1899, 416.

7. Gerhardt, C.—Ueber das Verhalten der Körperarterien bei Basedow'scher Krankheit, Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1896, i, 135.

8. Hewlett and Van Zwaluwenburg.—The Rate of Blood Flow in the Arm. Heart, 1909, i, 87.

9. —Plesch—Hamodynamische Studien. Zft f. exp. Path. u. Ther., 1909, vi, 380.

10. Murray—On Exophthalmic Goitre and its Treatment, Lancet, 1905, ii, 1379.

11. Hewlett—Clinical Observations on Absolutely Irregular Hearts, Jour. Am. Med. Assn., 1908, li, 655.

THE RADICAL TREATMENT OF INTERNAL HEMORRHOIDS WITHOUT ANESTHESIA AND WITHOUT PAIN.

JAMES A. DUNCAN, M. D.,
Toledo.

[Read before the Ohio State Medical Association.]

The title of this paper is at first glance misleading, in that any other than an extensive cutting operation has always been regarded as in a measure only palliative. The judicious use of the actual cautery, however, will accomplish as perfect and permanent results as any operation devised for the cure of internal hemorrhoids. There have been many cutting and clamp operations, but the mere fact that so many are advocated, is proof that no one of them meets with the entire approval of operators. The method of application of the actual cautery is not a new one by any means; it has been revised and discarded many times by men who have given extensive, if not always judicious, use.

The operation has many points in its favor, and I believe fewer dangers and disadvantages than any other method.

Its intelligent application demands a close study of the blood and nerve supply of the rectum, which I will briefly review:

The nerve supply is from the internal pudic and sympathetic. The distribution of the first is to the sphincters and integument around the anus, which accounts for the pain of fissures, etc., in this location. Above the sphincter, the only nerve supply is the sympathetic, the same as in other parts of the intestine, an amputation of which causes no pain; therefore in the use of the cautery, so long as the parts supplied by the internal pudic are not scarified, no pain results.

The intestine vascularity is due to the number of vessels, their arrangement and peculiar anastomosis. The arteries are many and carry a large amount of blood to this area, but have no direct influence on the production of the condition, so need not be considered. The veins, however, are important; they start from the hemorrhoidal plexus which surrounds the lower end of the rectum, formed by the anastomosis of all the hemorrhoidal veins which then empty into both the general circulation by the way of the middle and inferior hemorrhoidal, to the internal pudic, and into the portal circulation through the superior hemorrhoidal to the inferior mesenteric. Aside from the connection with this plexus, these veins going to the general circulation do not pass through rectal tissue, but through the ischio

rectal fossa and drain blood from the anus and adjacent integument, but only a very small portion of the lower end of the rectum, consequently are little concerned in the production of internal hemorrhoids. The superior hemorrhoidal, however, is made up of six branches from the plexus, which, lying parallel, pass upward along the rectum, lying, with very little support, just beneath the mucosa for a distance of about three inches, they then pierce the muscular coat and become arranged in a circular manner at right angles to the long axis of the gut, where the main vein is formed.

Thus there are several items which predispose varicosity in the tributaries of this vein: First, the long parallel course of the vessels under the mucosa; second, the poor support derived in this position, as the mucosa must change its form relative to the amount of fecal matter contained; third, in a sitting or standing posture they are in an upright position; fourth, in constipation they undergo pressure; fifth, they have no valves; sixth, they are congested in every form of portal obstruction including the physiological hyperemia of the liver during digestion.

With these factors to influence, it is easy to see why this condition occurs so frequently. People in every walk of life are afflicted, but it is most frequently found in the lower walks of life, in men who depend on every day's work for a living and who cannot afford to lose the time necessary for an extensive operation. Little can be accomplished in general medication or local applications excepting the correction of constipation. So these patients drift from physicians until forced to undergo some form of operative procedure. The method adopted should be the one causing the least pain and discomfort and enable the patient to return to work in the shortest possible time. This is all accomplished by the use of the cautery.

The operation is greatly facilitated by the fact that the branches of the superior hemorrhoidal vein, which is chiefly affected, is so accessible, and the region free from sensory nerve supply. As there is no engorgement in the bowel above the passage of the veins through the apertures in the muscle, this should be the point of the first application of the cautery coming down the course of the vein at each succeeding treatment. It is rarely necessary to cauterize within one inch of the anus as the contraction of the first scarification will tend to obliterate the dilations below. This is fortunate in that the nearer you approach the anus the more liable you are to have pain following the application. The technique of the operation is as follows: The patient is instructed to

use an enema and take a position lying on his left side on the table with both knees drawn up; no local anesthetic is used; after applying vaseline to the finger cot the finger is introduced into the rectum, carefully replacing any involuted mucous membrane, and the location of the dilated veins above ascertained. As the finger is withdrawn it is replaced by the speculum with the slide directed against the wall on which the saculation is located; when in place, the slide is gently withdrawn and the hemorrhoid bulges through the opening into view. It is then well scarified with the flat surface of the cautery at dull red heat, care being taken to cover all the exposed area without going deep enough to injure the musculature. Too large an area should not be treated at one sitting, but the speculum can be turned to a saculation on the opposite side and the same procedure gone through as before. After an interval of five to seven days, if the condition still persists, a lower level can be treated, continuing in this manner until the engorgement has disappeared.

The number of applications depends on the severity of the disease. I have seen a single application permanently cure a small capillary hemorrhoid, while in obstinate cases twenty or more may be necessary. The limitations of the operation are only found in highly sensitive or neurasthenic individuals; these do not constitute over 1 per cent of cases and are about equally divided as to sex.

As before stated, this operation is an old and very simple procedure, and in many hands has proved inefficient; but I believe the reason for this is too much was undertaken at a single application and an area altogether too large cauterized recklessly with no regard for the depth penetrated, nor consideration of the nerve supply in the vicinity of the anus, resulting at times in stricture or particularly painful convalescence, both of which a careful light application repeated many times would entirely obviate. The dangers of the operation are nil; no anesthetic is used. There is by no chance any hemorrhage, particularly as the work does not approach too close to the anus. There is no danger of stricture, as the cauterized area does not encircle the bowel, nor is an embolism ever formed.

Further, as a matter of convenience, there is lack of nausea, and pain during the application, or later, during defecation, the patient does not lose a single hour from his occupation. All of these are factors to be considered, as most of them follow in the sequence of the use of the clamp, knife or ligature in this location.

DISCUSSION.

Walter Irwin Le Fevre, Cleveland: I was very much interested in Dr. Duncan's paper. Personally I have had no experience with this method. Have frequently used the clamp and cautery under general anesthesia. It certainly appears to be the proper method in those cases of capillary hemorrhoids; whether it would be all right in the severe cases I am not quite so decided. Would like to ask if he has any trouble with the sloughing; and if not, how he can avoid it.

George B. Evans, Dayton: I take it that in this case the hemorrhoid simply drops into the aperture; that all you get is mucosa, or possibly sub-mucosa, unless the pedicle is long. Therefore, you do not get the entire hemorrhoid. At any rate, very rarely would you get the entire hemorrhoid; consequently you get only a partial result. If you take the old method under general anesthesia, the chances are in nine out of ten cases you will get only the mucosa or possibly the sub-mucosa. The same is true of the ligature. Pennington dilates the sphincter muscle thoroughly and brings the hemorrhoid prominently into view. Dr. Cullen of Johns Hopkins uses a "T" clamp and turns the hemorrhoid right out into your face, and then with a curved scissors he can remove the entire hemorrhoid. If you have a bleeding vessel, don't simply twist it. Tie all vessels with a fine catgut or thread. Formerly a wad of gauze has been used. Now, we use a rubber tube, six to eight inches long, covered with gauze, and the end of this covered over with a condom; place this in the rectum and apply a "T" bandage. Remove plug in twenty-four to thirty-six hours, and when removed, rectum looks like a baby's. Then you have removed entirely the hemorrhoids. I was formerly a great advocate of the clamp and cautery because I was taught to use it. I criticized Dr. Pennington for not tying his vessels. I believe the enucleation method as practiced by Dr. Pennington is the ideal method.

I have been criticised on account of so much danger of sepsis. Wish to call attention to a patient of mine who was instructed to take an enema, and in addition he took an ounce of Epsom salts. I operated on him, and at about 4 o'clock in the afternoon the salts operated, and everything was saturated with feces. I removed the tube at 6 o'clock and there was no hemorrhage, no temperature, and the man had an uneventful recovery.

L. J. Hirschman, Detroit: I have been very much interested in this method of Dr. Duncan's. I have heard him describe it before. Dr. Duncan stands alone in the advocacy of this method. I have advocated the clamp and cautery, but in the hands of the ordinary man it is very dangerous, particularly the cautery. The disadvantages of Dr. Duncan's method to me would be that in spite of the development of scar tissue, you get a turgescence of the surrounding tissues and return of the condition. Dr. Duncan's method is simply a scarring of the mucosa, and you are bound to get a return of the former condition. These patients are usually in a perturbed mental condition, and the odor is obnoxious to them. The smoke obscures the vision. I practically don't

use the cautery. One point about Dr. Duncan's method which would not appeal to a great many people is the number of treatments. If he can devise a method of curing in one treatment he will obtain better results. In regard to the forceps with which you clamp the tissue, I have devised a battle-ax forceps without teeth. I use a curved, dull pointed, handled needle, threaded with No. 2 Chromic catgut, pass this through the hemorrhoid, and ligate the vessels before cutting. When in a hurry it is not necessary to do anything further than ligate the vessels, but when you have the time it is better to go ahead and remove the hemorrhoid after ligating. Ordinary cases can leave their bed in twenty-four hours. In this operation you don't have to pack the rectum afterwards. A small tube covered with gauze is all that is necessary to use to permit the escape of gas. Where you use the cautery you don't know where the burn is going to stop.

James A. Duncan, Toledo, (closing): In reply to Dr. Le Fevre will say there is practically no sloughing. Dr. Evans keeps his patients in bed only four or five days. In five minutes my patients are out of the office. Dr. Hirschman speaks about the smoke that you cannot see. It is the easiest matter in the world to blow it out of the speculum. Regarding the smell, he means that it is very disagreeable to the doctor. The doctor has already pointed out that it is much more agreeable than to work about the mouth and nose. For the past twelve years my patients run into thousands. very rarely do they come back after cured for further treatment. Then it is generally due to the patient himself. It is like other chronic cases. I want to say to both these gentlemen that if they ever have internal hemorrhoids, I think they will come and see me.

Regarding occupation: it makes no difference about the occupation. I have had linemen, motor-men, etc., simply leave their work for a few minutes, come into my office, and then return to their work. About the sloughing: we don't have any trouble with this, because we don't burn very deeply.

THE VACCINE TREATMENT OF TUBERCULOUS CERVICAL ADENITIS IN CHILDREN.

OSCAR BERGHAUSEN, B. A., M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

The enlargement of glands in the cervical region may be due to such a variety of causes that a differential diagnosis as to the etiological factors causing a given enlargement must be carefully made before the proper treatment can be instituted. The adenitis representing merely a lymphatic infection, the source of the trouble must be ascertained. It therefore becomes necessary to search for enlarged tonsils, adenoids, suppurative processes about the head and neck regions, and the elimination of the source of such

infections usually results in an improvement in the lymphatic condition. General conditions, as syphilis Hodgkins disease and Leukemia must necessarily be differentiated.

Although tuberculosis of the cervical glands may result from infections gained through the mucous membranes of the nose and throat, through the tonsils, or even through superficial wounds or eczematous patches, the process in the majority of the cases is probably a secondary one to bronchial gland involvement. Tuberculosis in children practically always begins in the lymphatic system, the glands acting as barriers. The child having little resistance against tuberculosis, the natural tendency is for it to spread along the lymph current, when a stasis in the lymph stream develops a scrofulous condition results. Most frequently the primary lesion is now considered to be a peri-bronchial lesion following an infection gained through the bronchi; the peri tracheal, subclavicular, supra clavicular and cervical involvement being an ascending one. In infants, during the first year of life, the process tends to spread rapidly, leading to a hazy clinical picture, only when localized processes become distinct, do localized symptoms arise. After the first year the tendency for localization becomes greater, with a corresponding increase in the resistance.

To establish a specific diagnosis in clinically doubtful cases the various local tuberculin reactions may be resorted to, or the injection method which by some is considered to be still more accurate. Experience has shown that the older the child the less valuable the positive reaction to the von Pirquet, Detre or Moro tests, for the very good reason that in children past two years of age the reaction is found positive in a goodly percentage of cases. On the other hand a negative reaction obtained in older children would indicate strongly that a tuberculous infection is not at hand, although it must be taken into consideration that a negative or delayed reaction may be obtained in healed or latent tuberculous, in miliary tuberculous and tuberculous meningitis. Such local reactions are probably the result of an inter-action between circulating antibodies and the toxin locally applied, and indicate that the child has at some time or other been subjected to a tuberculous infection; that it has reacted, and that it has retained this property of reacting to the slightest stimulus. A positive reaction need not necessarily indicate that enlarged cervical glands are tuberculous in origin, a thorough clinical examination must be made, and the reaction merely considered as one link in the chain of evidence.

The tuberculous origin having been definitely established, the next question to be asked is: When are we justified in using tuberculin as a curative measure? In the first place, what do we accomplish when we do use it? Tuberculin is not a specific in the sense that antitoxin is for diphtheria. When injected, the former acts merely as an antigen, and stimulates the system to the production of anti-bodies. In adenitis infections associated with fever, we see in the latter merely an expression on the part of nature to react to the toxines liberated; there results in such cases an irregular auto-inoculation and primarily little can be gained by injecting tuberculin in such instances. It is therefore in more localized conditions in which a temperature of not more than 99.4-100 degrees is reached, that good can be expected. When the patient is at a sanatorium and under constant observation, through rest the irregular inoculation can be controlled, the temperature irregularities can be controlled to a certain extent, and under such conditions some authorities advise the use of tuberculin therapeutically in more advanced cases.

Through rest, proper diet, tonics and change of climate, conditions are afforded the child for combatting the infection along similar lines, and since, when such measures are instituted the glandular condition tends to improve, they should first be tried. It is in cases which cannot enjoy all such advantages, or having tried them no improvement has followed, that tuberculin frequently acts as the necessary stimulus to a sluggish system.

The question as to surgical intervention naturally arises. When the glands are broken down and become fluctuating in character, some advise aspiration from time to time, and prolonged tuberculin treatment. In these cases, and when considerable enlargement of individual glands without softening is present, surgical intervention had better be resorted to. Following their removal, if the child has not the advantage of a change in climate, tuberculin treatment should be instituted to assist in the general up-building of the patient, the reduction of inaccessible glands and especially in those cases where a discharge and sinuses persist. Preliminary to surgical intervention, tuberculin may be used to facilitate any removal of the glands and to hasten recovery.

The question as to the variety of the tuberculin to be used and the manner of administration is a very important one and probably each advocate follows his own plan. Investigations as to the variety of bacillus, whether of human or bovine origin, have shown that the bovine type can, not

infrequently, be isolated from the excised glands. The question of the transmutability of the species must also be taken into consideration. These questions have not been definitely settled as yet and the confusion in the results has probably arisen because of the difficulty in differentiating the two species and because of the errors which were made in the interpreting experimental findings. That both types of bacilli are capable of producing glandular tuberculosis in the human is acknowledged today, the human type of infection being predominant, however. Since the human type of tuberculin and especially the T. R. preparation, has given eminently satisfactory results in the glandular type, this preparation should be employed at the start. It has happened that in those cases complicated by pulmonary involvement, the human type has shown itself too toxic, and the bovine type of tuberculin has been instituted only to be followed by a flaring up of the glandular condition. It has not been my lot to meet with such a condition, but references are not uncommon in the literature. In these cases it becomes a matter of therapeutic judgment and careful immunizing, probably with unequal mixtures of two varieties of tuberculins, must be resorted to.

With regard to the size and interval of dosage, two methods are employed. In the one, smallest amounts are given at intervals of seven to ten days, over a prolonged period; in the other, small doses are begun with, but the size of dosage is rapidly increased every two or three days until fairly large sized doses are given once a week and repeated until no local effects are produced, when the dosage is again increased. This process is continued until one milligram has been given, which is then repeated several times. Controlling the injections by means of the opsonic index determinations has not shown itself to be a practical method.

It must be remembered that each dose, no matter how small, acts as a stimulus and serves to immunize the patient. The value of the tuberculin treatment lies in the immunizing response. When minute doses are used this response can frequently only be determined by changes in the index terminations, which changes, however, do not always go hand in hand with changes in the clinical picture. Practically it will be found better to begin with smallest doses, say 1-20,000 mg., and repeat at intervals of two or three days for a month, when intervals of seven days can be allowed. No schematic method, however, can be followed, and the clinical findings, temperature records, pulse, etc., must be considered. Usually, however, a point will soon be reached where im-

provement can be noticed, as indicated by gain in weight, in cessation of other systemic symptoms, by the glands becoming more movable and finally their diminution in size. At this point the patient is showing an immunizing response, and a local improvement in addition is resulting. This dose should be repeated, provided no general manifestations, as fever, etc., develop, until the process either clears up, or has come to a standstill, when the dosage should again be increased. Usually in children enormous doses are not necessary and improvement will often become manifest when doses of 1-1000 to 1-500 mg. are given. Children are very tolerant to tuberculin but variations will be met with in different cases and that is why it becomes necessary to individualize.

During the first year of life tuberculosis is not as common as in later years and when it does occur the tendency is for it to spread. In these cases proper hygienic surroundings must be obtained and tuberculin, if used at all, must be used very carefully, and probably only for immunizing purposes, smaller doses being employed. In later years the tendency is for localization and in these cases the tuberculin can be employed along the lines previously mentioned.

Since tuberculosis in children often assumes a varied picture with a tendency to anemia, loss of weight and gastro-intestinal catarrh, and later the development of a generalized miliary type, meningitis and peritonitis, careful clinical examinations must be made and tuberculin always used with caution. In the latter complications its use is generally counterindicated.

By many, tuberculosis adenitis is supposed to be associated in the majority of cases with pulmonary involvement. Dullness on the right side in the infra clavicular region, associated with rales, is not uncommon. Many of these cases are due to an accompanying localized bronchitis, however, and the lung at autopsies has been frequently found free from further involvement. In these cases tuberculin may be used along the lines mentioned earlier.

It not infrequently happens that cervical glands suppurate and leave discharging sinuses, especially in scrofulous children. Such infections are usually mixed ones, and in fully one-half the number of cases staphylococci can be isolated. In these cases the proper vaccines should be prepared and used in addition to the tuberculin.

WHITE PLAGUE'S DEATH RATE DECREASES. Mortality from Consumption, Cancer, Typhoid, etc., in 1909, Shown in Census Bureau's Bulletin.

WASHINGTON, D. C., September 26, 1910.—While the total number, 81,720, of deaths from tubercu-

losis in 1909 was greater than for any preceding year and exceeded by 3,431 the number, 78,289, compiled for 1908, the death rate, in the Census Bureau's death registration states and cities, showed a decline from 173.9 in 1908 to 167.5 per 100,000 estimated population in 1909, as reported in the forthcoming Census Bureau bulletin on mortality statistics prepared by Dr. Cressy L. Wilbur, chief statistician for vital statistics, and submitted to Director Durand.

Excluding Ohio, which is shown only for 1909, 11 of the 17 registration states for which data are given presented numerical decreases in deaths from tuberculosis for 1909 as compared with 1908, the largest being for New York (415) and Rhode Island (107). Deaths from tuberculosis increased in Washington (91) and California (78) among the 6 states showing more deaths from this cause. Among the larger cities the chief fluctuations were increases of 85 for St. Louis, Mo.; 61 for Minneapolis, Minn.; 58 for Toledo, Ohio, and 56 for New Haven, Conn.; significant from their small amount; while decreases of 222 occurred for New York, N. Y.; 194 for Philadelphia, Pa., and 149 for New Orleans, La.

Cancer showed a much greater proportional increase in the number of deaths than tuberculosis, rising from 33,465 for 1908 to 37,562 for 1909. The death rate increased from 74.3 to 77, the latter being the highest crude death rate from cancer thus far recorded for the registration area of the United States.

It should be remembered, the bulletin points out, that cancer is one of the diseases having a peculiar age distribution for which the study of crude death rates is apt to be especially misleading, and until a careful analysis can be made of the data, with reference to the population details available after the compilation of the census of the present year, it will be wise to limit inferences to the fact that the number of deaths so reported and the crude rate from this cause show a constant tendency to increase from year to year. The probability of more accurate statement of this disease as a cause of death by attending physicians must be taken into consideration, and the fact that the saving of lives from tuberculosis and other preventable diseases of early or middle life would leave more persons subject to cancer at the cancer ages, and thus increase the total number of deaths from this cause and the crude cancer rate, although the actual incidence of the disease at the various periods of life may not have been altered materially.

The total number of deaths caused by typhoid fever in the registration area for the year 1909 was 10,772, a reduction of 653 from the number, 11,375, recorded for the somewhat smaller registration area of 1908. The death rate fell from 25.3 to 22 per 100,000 estimated population, these rates being based on the populations as estimated upon the average annual increase between the last two censuses.

The typhoid fever death rate for 1908 was the lowest recorded since the series of census annual reports was instituted, and the rate for 1909 shows a marked reduction from that of the previous year. It is nearly one-third less than the rate shown for the five-year period 1901-1905 (32.2), although still more than twice as large as that of England and Wales.

INFANTILE PARALYSIS FROM THE
STANDPOINT OF THE ORTHOPEDIST.

ALEX. M. STEINFELD, M. D.
Columbus.

[Read before the Ohio State Medical Association.]

In a paper limited in time, the subject under consideration cannot be completely dealt with, neither do I expect to set forth anything that is radically new, but rather to emphasize the principles involved in treating the condition, from the standpoint of the orthopedic surgeon, and thereby bring this subject before this section for discussion. It is certainly within the memory of most of us present, when the paralysis of childhood, particularly that form of paralysis known as anterior poliomyelitis, was considered almost hopeless, and if a child so afflicted ever recovered the use of its limbs or limb, it was considered an act of providence.

The light first appeared on the subject when subcutaneous tenotomy was introduced, which aided in correcting the deformities that followed this catastrophe and other developments of methods and appliances rapidly followed.

Unfortunately patients with infantile paralysis are not brought to the attention of the orthopedic surgeon until atrophy of all muscles is marked and deformity has occurred, and then while the diagnosis is easy the relief is difficult. I believe that if these cases were seen early that much of the ruin to muscle and the deforming effect could be prevented.

After the acute symptoms have subsided the chief object of the attending surgeon is to prevent, if possible, the overstretching of partially involved muscles, for it will usually be found that one or more groups of muscles are involved, and that the deformities are due to the fact that the non-affected muscles over-balance, as it were, the partially or completely paralyzed group.

This is particularly true of the lower extremity. In the early stages of infantile paralysis the use of massage and electricity may prevent an extreme degree of atrophy, but I do not believe that it has any direct influence on the paralyzed group of muscles, other than to temporarily improve the circulation. If the massage could be carried out by a competent masseur, the results might be better, but as a rule the patients are found in families where expense must be considered. I usually instruct the mother how to carry out this treatment and then have her report to me every week or ten days, and in this way keep in touch with the patient.

In many cases the use of proper appliances may restore the patient to partial usefulness. Muscular power is partially restored by the use of the limb, and this increased muscular power cannot be obtained by massage or electricity. Function of atrophied muscle, in a measure, restores usefulness, and this is why appliances when worn over too long a period cause the atrophy of disuse, as the muscles not involved cannot perform their functions when braced. However, I do not wish to be misunderstood in regard to the use of appliances in the early periods of this condition, but I do not believe in the use of appliances over all other methods. In many cases, braces are made for a child, and the treatment stops there and no other methods of correction are undertaken.

The operative measures in the treatment of paralytic deformities are: First, the forcible correction of the deformity, particularly of the foot. This should always be done before any attempt is made at tendon transplanting, because the overstrained muscles may regain their function, after the deformity has been corrected, and if this occurs, then the transplanting of tendons is not indicated. To illustrate: In a case of paralytic talipes equino varus, the tibialis anticus has become a supinator on account of the over-balance of the supinators over the pronators, and if the forcible correction is done, the strain is taken from the pronators, the tibialis anticus may regain its function, and the same is true of the pronators. In this operation the correction must be done in both Lisfranc and Chopart's articulation and then the foot should be forcibly plantar flexed and over corrected. After this procedure, I have seen dorsal flexion regained and the lack of balance between supinators and pronators so far restored that tenoplasty was not indicated.

In paralytic flat foot I much prefer the use of the Whitman arch combined with a properly constructed shoe, because I do not believe that the transplanting of a single tendon to a paralytic pronator will be sufficient to carry the weight of the body, and the results obtained from the appliance and the shoe are equally as good if not better than the tendon operation.

Tenoplasty should not be done until you are absolutely sure that the process in the involved muscle has ceased, and by that I mean that the muscle transplanted to, is completely without function. Lorenz says, "Every muscle fibre must be without function, before tenoplasty is done because of the danger of the muscle regaining its normal activity." I do not believe that the results of tenoplasty are immediate and that we have been prone to anticipate results before the

new function could be taken on by the muscle involved.

Another source of error has been that we do not open up to the muscle itself, and have only done tendon transplanting. I remember distinctly the admonition given me by the late lamented Professor Hoffa, who said, "Be sure to go to the muscle itself and do not confine yourself to the tendon only." The principle was borne out by Lange and Lorenz. By this was meant not simply to divide the tendon but to divide the tendon up to the muscle fibre.

"Wollenberg has recently pointed out the fact that if the transplanted tendon becomes atrophic and fails to functionate, that in all probability the muscle belly has been opened up too far and thereby deprived the transplanted part of its nerve influence. This he demonstrated by animal experiments."

In order to overcome this danger Lange transplants entire muscles, using the less important structures for this purpose. He uses the extensor or flexor hallucis or one of the peroneus muscles, as these muscles are not important in the fundamental motions of the foot. The scheme as suggested by Lange is shown in the chart.

1. The attachment of the tendon Achilles, which controls the plantar flexion.
2. The point of attachment of the tibialis anticus.
3. Is the relative point of attachment of the peroneus tertius.
- 4 The principal supinator of the foot, the tibialis posticus.
5. The peroneus brevis, the chief pronator.

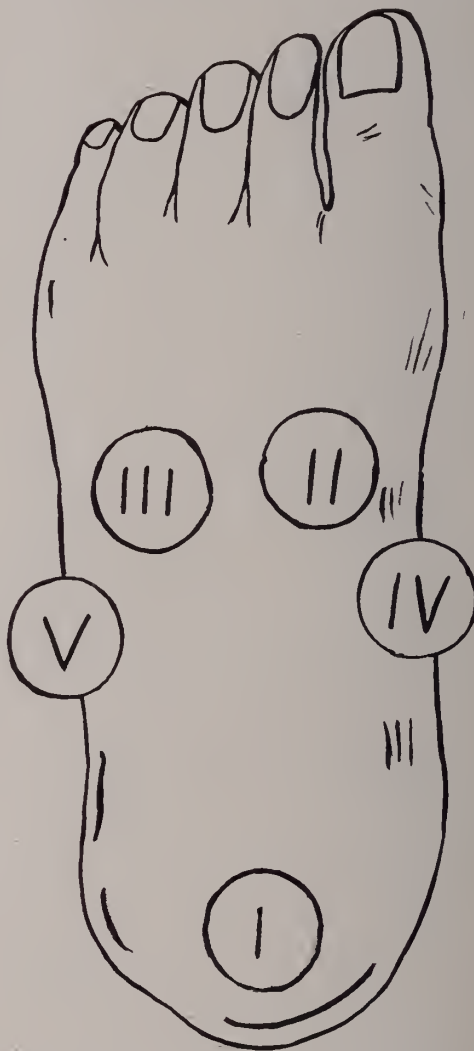
The transplanted muscle must neither be too long or short; its route should be direct and not tortuous and its attachment should be directly to the periosteum, as by this means the force is placed at that portion of the part where its influence will be the most beneficial. All suture material should be silk properly sterilized.

Another cause of failure is that the parents frequently neglect to bring the child back for observation, and the foot is not properly cared for. Overstraining of opposing muscle groups and faulty weight bearing in walking with recurrence of the deformity are the results that follow this neglect.

When shortened muscles are to be lengthened the use of strands of silk as a basic means has proven successful, and by this I mean strands of silk placed between the divided tendon in order to lengthen. In cases of this type connective tissue is formed about the silk nucleus, giving firm union and support. In over-stretched muscle the simple shortening by the tucking method gives

but temporary results, as over-stretching again occurs unless the opposing muscle is lengthened. Good results are obtained by tendon operations and the best results are those of the knee and ankle joints.

In the knee joint when the quadriceps extensor is paralyzed brilliant results can be obtained by



transplanting one of the hamstring tendons to the extensor.

When the involvement of the joint is complete then arthrodesis must be considered, as a flail articulation makes a leg useless as a support; the object of the procedure is to completely ankylose the articulation and thereby give the individual a good walking base.

This operation is particularly adaptable to the ankle joint. The operation as devised by Goldth-

wait, gives, in the opinion of the writer, the best results, and is as follows: A curved incision, convex downward, is made over the outer side of the foot and through this the tendons of the peroneus longus and brevis are cut, as are the lateral ligaments so that the foot can be bent to the inside and disarticulated at the astraglo-calcaneo articulation. In this the astragalus remains attached to the tibia, and the under surface is exposed so that it can be denuded of its cartilage. After the same thing is done to the upper articular surface of the os calcis, the remainder of the ankle ligament is then divided and the astragalus is disarticulated so that its upper surface is thoroughly exposed, as is also the tibular and fibular aspect of the ankle joint. The cartilage is next removed from all these bones and the dissection is carried deeply enough so that fresh bone is exposed. The foot is then articulated, with the bones in position and the alignment noted. If when the bones are in full apposition the foot is straight and there is no tendency for the ankle joint to incline to the inside, or the foot to pronate, it should be considered satisfactory. If, on the other hand, the alignment is such that the inner malleolus is more prominent or the foot is in position of pronation, the results will be disappointing, as the line of weight will be attended with so much strain that union will be difficult and the best results will be impossible. If this is the case, a wedge-shaped piece of bone should be removed from the upper part of the astragalus, the base being at the inner edge and sufficient should be removed that when the bones are again put together the alignment will be correct. As the bones are now adjusted the space between the malleolus on the side of the astragalus is so much increased over the normal, owing to the fact that the cartilage has been so extensively removed and this naturally increases the tendency to lateral motion, so that in this respect the joint is weakened.

To remedy this and to change the axis of the outer malleolus so that it may become a real support to the ankle and hold the astragalus in place, an oblique osteotomy of the fibula is performed, the section on the inner side extending into the upper part of the joint. The malleolus is then bent in so that the axis is vertical and so that it rests firmly against the astragalus when that bone has been pressed against the inner malleolus. After this has been accomplished the ligaments are sutured as far as possible. The peroneal tendons are joined, and the wound closed tightly. In closing the wound and applying the dressings, care is to be taken to see

that the position of the bones is not disturbed, and this is finally held by plaster of paris bandages. The dressing need not be disturbed for two weeks, at which time a careful examination is made, to be sure that the parts are in correct position. A new dressing is applied, allowed to remain for four weeks, after which weight bearing in the cast should be started. The support being gradually omitted as the stability of the joint seems to justify. Two or three months should be allowed, and in extreme cases six, before the repair is complete. This operation should not be done before the tenth year, as the articular surfaces are not sufficiently developed at an earlier age to insure good results. I do not believe that arthrodesis should be done at the knee joint as good lateral support can be obtained by proper appliance or splint and at the same time allow motion in the joint.

In closing the points I have endeavored to bring out are:

First: Cases of infantile paralysis when recognized early should so be treated as to prevent deformity as far as possible.

Second: In the early stages the use of massage and proper appliances to prevent overstretching and contractures.

Third: The forcible correction of all deformities, and then wait before any other measure is undertaken and see what the result of this procedure will be.

Fourth: Teno-plasty, directly to the perios-teum, in selected cases when all evidences of activity in the paralyzed muscle has ceased.

Fifth: Arthrodesis in flail ankle joints in children, at the proper age.

Sixth: Splints and appliances must be worn until union is complete and by this I mean until body weight can be born without danger of the re-occurrence of the deformity.

DISCUSSION.

H. O. Feiss, Cleveland: I wish simply to thank the doctor for his excellent paper on this subject, especially with regard to massage and electricity in the early stages. Now it was shown by Gowers many years ago, and many others since that time, that any improvement is the spontaneous improvement which usually results from the exudate in the spinal cord clearing up, but where a neuron is disturbed, you cannot expect any effect on the peripheral part to affect the nutrition of the cell. But, of course, treatment is necessary in the early stage in order that deformity may be prevented.

With regard to the subject of tendon operations, Dr. Steinfeld has covered the field pretty well, but he neglected to state that a great many cases are not amenable to such treatment. It is often wiser to let such cases alone and not to operate, perhaps doing an arthrodesis, if it can

be done. We must remember that if the tendons are paralyzed, there is only a definite amount of power left in that joint, and all we can do is to distribute that power more equably, but we cannot restore the part to its normal function. That must always be explained beforehand to the patient.

H. J. Whitacre, Cincinnati: I would just like to make one or two points. In the matter of tendon lengthening, I want to make one technical suggestion which, it seems to me, is ever so much better than using silk to lengthen the tendon. Splitting the tendon and then lengthening it (illustrating on the board) is a method which I personally use in lengthening the tendon. The other point I wish to make is in reference to the diagnosis. In many of these cases it is perfectly amazing the extent to which osteo-mylitis may affect the nerve distribution. I think we are often confused in our diagnosis from the fact that it does not occur in the anterior group of muscles. I have seen a case of paralysis of all the muscles below the back diagnosed as osteo-mylitis. This man was sixty-five or seventy years of age, and made a subsequent recovery, with localized spots of paralysis over the body; only a partial recovery. I have recently seen a case in which the only muscles involved was the sartorius and one or two abductors.

Another valuable point in the paper is the great efficiency of the operation of arthrodesis as a remedy in these patients. About two years ago I remember a patient was presented to me, absolutely disabled, who had the arms involved as well as the lower extremities, but the lower extremities were entirely useless, so that he went about on crutches. We did an arthrodesis in both ankles, and that boy today is walking about without a crutch or cane. I have felt that the articulation between the astragalus and os calcis is essential, and in my operations I have removed the cartilage between the articulating structures from the astragalus and the tibia and fibula, and depended upon motion in the smaller joints below for such elasticity of step as we hope to get from such an operation.

A. M. Steinfeld, Columbus, (closing): Instead of doing extensive operations of tendon transplanting, as Dr. Feiss has stated, arthrodesis is a much more desirable procedure, because if you should be so unfortunate, in doing an extensive tendon transplanting, and get infection, you would get a fibrous ankylosis, which would be worse than the primary condition. So that where the involvement is great, arthrodesis is the better operation. In regard to tendon lengthening, I have seen cases operated on by Lange, but instead of lengthening the tendon, he used the entire muscle itself. I have tried lengthening single muscles and tendons by the method Dr. Whitacre has shown, but where you are going to transplant a tendon, I think you should use the entire muscle.

CHAIRMAN'S ADDRESS—SECTION OF OBSTETRICS AND PEDIATRICS.

WM. GILLESPIE, M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

A section which represents two distinct divisions of the science of medicine would perhaps call for an address covering each division of its work, but the fact that an inordinate amount of time might be thus consumed, coupled with the fact that pediatrics is represented upon our program more fully than obstetrics seems to justify my confining my remarks to that department with whose problems I feel most able to successfully cope.

From time immemorial it has been the special function of chairmen to recite in a eulogistic way the recent advances in the science and art as they touch the lives and practices of the different members. In this way interest may be aroused and efforts be stimulated to push still further the advance posts of the army of science. But the experienced soldier knows that there is a vast difference between a raid and a judiciously conducted aggressive campaign. The one can simply annoy temporarily, the other may destroy permanently the enemy. The raiders and skirmishers may find the lines of least resistance, but it is the slow plodding line of battle which wins the victories and drives back the enemy.

One who has followed studiously the literature of obstetric progress of the last century cannot but be struck by the number of absurdities which have sprung up and flourished for a period and then been dropped into the waste basket of science. As we dig through the musty archives of our oldest and ablest societies we smile in pity for many of the pet beliefs of even the giants of their day. On the other hand one is occasionally compelled to stand in admiration and awe before the printed page which records beliefs and opinions far in advance of their day. The chief lesson taught, it seems to me, is this: most of our advances are but visionary raids which leave little effect behind them and real progress is pitifully small when separated from the chaff of futile efforts.

Each generation when it has overthrown the beliefs of its predecessors and recorded an equal number of errors of its own passes on the next the task of garnering the small harvest of real facts which it has added to the sum of scientific knowledge.

The very nature of our work precludes its being

done with mathematical precision, but that fact alone should render us the more cautious in accepting as facts anything which has not been carefully scrutinized to see how it comports with those facts which have been proven.

The plausible theory should arouse the same distrust in the scientific mind that the plausible man does in the business mind, and the more plausible it appears the more carefully should its credentials be scrutinized. If this plan was generally followed each generation could correct a larger percentage of its own errors and the time saved from running upon false scents could be utilized in establishing fundamental facts for the guidance of our successors.

It has been my fortune of late to be able to trace through a long period the transactions of a society composed of eminent men whose contributions at first hand had not before been accessible to me. Some of the papers contained in those transactions have exercised a vast influence upon the obstetric doctrines of the present day, although a critical analysis reveals them to be full of errors; while some which possess, to my mind, vastly more value have lain buried from the eyes of the medical profession. It has ever been so, and will probably always be, but if every reader was a critic and every practitioner was a judge who judged an alleged fact by the way it accorded with his experience, the influence of errors would be lessened, the value of truth would be heightened and the certainty of progress would be increased. But if we, like the lawyer, hail with joy every opinion which seems to bolster up our preconceived notions, we may make a case which will deceive our jury, the general profession, but in proportion to our success will be the harm occurring to the science we follow. The scramble to get into the advance column, to be among the first to adopt a new expedient, the ambition to be known as progressive, and up to date, is responsible for much of the lack of real progress which all students bewail.

The up-to-date idea gives the weakling a chance. The man with a quick, but feeble, illogical mind, can easily be up to date, but to be up to the highest possible standard of scientific truth is beyond his powers, and as it is human nature to desire to shine, we will always have him with us. When one sets himself up as a critic he is treading on dangerous ground, for, having claimed the right, he cannot deny it to another. In the criticisms which I make of certain modern obstetric doctrines, I hope to elicit a discussion not only of those doctrines, but of the criticisms themselves.

We as physicians are apt to look to the prac-

tical in our daily work, but may become visionary in our speculations, unless we watch with care our thoughts. We must have ideals if we would advance, but he who deals daily with cause and effect should be practical even with his ideals.

Caesarean Section has been extensively advocated for a number of years as the treatment for placenta previa centralis, and yet I recently heard one of its first and most convincing advocates admit that he had not yet been confronted by a case in which he felt justified in resorting to it. Yet most of his time in the class room, when lecturing on placenta previa, had been spent in discussing Caesarean section, and his students have left their alma mater with little notion of any other treatment.

How visionary is this proposition may be indicated by a very simple illustration. It is assumed that the fearful fetal mortality could be done away with, for the child is not damaged by this method of delivery. Since the society met last year in Cincinnati, I have been called upon to manage the delivery in nine cases of placenta previa. The elastic water bag was used to control hemorrhage, and seven of the nine children were born alive. One that was born dead was so premature that no account of its interests need be taken, and no haste in its delivery was used or it would probably have been born alive. But of the nine children only three survived, and the cause of death in each case but one was prematurity. Only two of the nine were mature; one was delivered at eight months and all the remainder from seven months and a few days to six months' gestation. This is the largest series of cases it has been my lot to see in so short a time, but they fairly accord, I believe, with my whole experience both as to fetal mortality and its chief cause, prematurity. One of these women bled one month before, and again three or four days before, and for the last eighteen hours before admission the hemorrhage was continuous. Twelve hours after delivery and twenty-four hours after admission she had a temperature of 106 and a pulse that could not be counted. It was her child which was lost, although at full time. One of the nine was managed with a loss of blood which was of no consequence, but died suddenly from chloroform, although it was given but lightly and by a man of great ability and mature judgment who had been for many years her family physician.

"By their fruits ye shall know them." Would Caesarean section have lessened this fetal mortality? Would it have lessened this maternal mortality?

The point I wish to make is whether we would not be better employed in working out the various

mechanical problems which confront the physician at the bedside, than in spinning rosy dreams which are never to be realized in the actual work.

The responsibilities of the teacher are so great that I find no difficulty in reconciling myself to private life, but my most arduous task for a number of years has been the guiding of young men into safe lines of practice and away from some of the visionary teachings of the class room.

There is a pretty generally accepted notion at present, that our medical colleges should have only professional teachers, who are not engaged in practice. When this time comes, in the practical departments, there will be an immense amount of unlearning to be done after the student is thrown upon his own resources.

There is nothing like a bedside test to try our theories by. Bacteriology has done much for surgery, and obstetrics particularly is under peculiar obligations to this, her younger sister.

But while we may be proud of our young sisters, we do not usually allow them to force their opinions upon us as final without examining their premises. I fear the practical workers in obstetrical lines have accepted too literally some of the findings of the bacteriologists, and have thereby lessened in large measure the usefulness of the obstetrician. It is practically impossible to have sterile hands. It is practically impossible to be sure that the vulva is clean.

It is practically impossible to avoid contaminating the vagina.

Therefore, we must not examine our patient unless compelled to do so in abnormal positions and presentations, or where it is apparent that nature is unequal to her task. Another bacterial doctrine closely related to the foregoing, is that the normal secretions of the vagina are antagonistic to the growth of pathogenic germs.

I accept without question the truth of these propositions, but not the conclusion drawn herefrom. The difference between logical and sophistical reasoning is that the latter seeks only such facts as will support its conclusions, while the former looks for all the evidence which may enable one to arrive at a correct conclusion.

The same consideration would debar us from doing surgery, particularly in the abdomen, till the patient was in extremis. This proposition is bolstered up by the assumption that it is possible to tell by abdominal palpitation all that it is necessary to know as to presentation, position and progress. I congratulate the possessor of such tactile skill, but have observed that it is usually acquired about the time that one retires from active obstetric practice. It is usually quite easy to tell the presentation and position by palpation

and auscultation, but progress is utterly beyond the ability of any man, it matters not how lax, and therefore favorable, the abdominal walls may be. There are exceptional cases where the dorsal surface of the child looks forward, while the occiput rotates backward, and this position of the head will be overlooked unless vaginal examinations are made, and, be it remembered, these are our most difficult and dangerous cases of posterior occiput. Every one knows how frequent it is for primarily posterior positions to rotate anterior during labor, and upon this mechanism, its success or failure, will our ability to judge of progress depend. Supra pubic palpation may reveal the forehead still prominent above the brim, but the uterus is, in many cases, so much retracted that our ability to estimate this point is not so great as at an earlier period of labor. Finally, and of much greater importance, we can know nothing of the condition of the lower uterine segment without vaginal examinations, and this is the most vital of all questions in obstetrical work.

To assume, as many of the opponents of vaginal examinations do, that the amount of progress may be accurately estimated by the depth to which the presenting head is engaged, is so fallacious that the only argument necessary to refute it is the statement of the clinical fact that in primiparous cases the head is usually within the pelvis several weeks before labor begins, and that those cases where the head and lower uterine segment rest upon the pelvic floor constitute one of our most troublesome classes. That one may estimate progress by the character of efforts made by the patient is usually true, but the exceptional cases, where frequent uterine contractions, accompanied by violent contractions of the accessory muscles, are observed with an undilated os, are sufficiently numerous to cause one, who is at once possessed of practical knowledge and discretion, to decline to accept this evidence of progress without the confirmatory testimony of the finger. On the other hand I have many times observed cases where the os was completely dilated, and nature was taking a rest to recuperate her strength for the few pains which were to complete the delivery, and yet no signs were present to indicate that true labor was actually on. These are the cases that terminate about the time the attendant is off the premises, after assuring the family that delivery may not occur for a day or two. I am not arguing in favor of promiscuous, careless, vaginal examinations, any more than I would argue in favor of toying in the peritoneal cavity, but this I do believe: If the opponents of vaginal examinations could succeed in impressing their

dogmas upon the profession the race of obstetricians would soon be extinct.

If the difficulties in securing absolute asepsis do not deter us from opening the peritoneal cavity, why should it preclude us from making vaginal examinations? If we will exercise the same care to be as aseptic as we can, the percentage of infection will be infinitely smaller than in our surgical work. There is another side to this question—the medico-legal.

Some years ago, when this question was up for discussion in the Academy of Medicine, I was startled at the apparent intent to lay all the blame of infection upon the medical attendant. As I knew of one able physician who was being prosecuted for malpractice, and another who was being threatened with similar action based upon this hypothesis, I endeavored to stem the tide of professional opinion, and turn the discussion into safe lines for the profession, by reciting a little personal experience. When in my youth I was engaged in practice in the country, it was not infrequent for me to see a cow which had died a few days after calving, from what the farmers called "dry-murrain," or "calf fever." On these occasions I had sufficient curiosity to open the abdomen and always found evidences of acute general peritonitis. I closed my remarks by asking, "If infection is always due to the lack of asepsis of the attendant, who infected these cows?" Living in the open fields, away from crowded sections where germ life thrives, the vaginal canal absolutely untouched by any object since she received the attentions of the father of her calf, she dies of puerperal infection.

Is it not more probable that a woman in her more crowded environment, and subjected to the act of copulation, and the use of the dirty douche nozzle, might develop puerperal infection without the doctor being responsible?"

The tide was stemmed and no man answered my argument. We might do well sometimes to imitate John Hunter, Sir. Jas. Y. Simpson, and Sir Spencer Wells and seek among domestic animals evidence to confirm or refute our opinions. If we vivisect and produce infection of the lower animals, in the prosecution of our studies of disease, why not accept the evidences which come to us without our acting as the intermediary for transmission?

No obstetrician who has not overlooked his opportunities for observation will doubt the proposition that much can be done through the use of the examining fingers to facilitate progress in many cases of lingering labor.

Lingering labor not only exhausts the muscular and nervous strength of the patient but predis-

poses to edema and consequent bruising or laceration of the soft parts. The immunity claimed from the ravages of the germs which find their way into the vagina, depends entirely upon the maintenance of the normal vaginal secretions and one of the most marked effects of slow, tedious labor is the perversion or entire absence of these secretions. Therefore, granting the truth of the proposition that normal secretions are antagonistic to germ life, many a woman when she goes into labor is, nevertheless, potentially infected and may become actually so whenever the restraining influence of the normal secretions is withdrawn. Granting, therefore, the possibility of the examining fingers causing infection, I yet maintain that if care is taken to guard against this danger, we may, by making vaginal examinations and guarding the woman against unnecessary exhaustion and delay, actually safeguard her against the dangers of infection.

Around this doctrine of the excessive dangers of intra-vaginal manipulations has grown another proposition which appears to me equally fallacious.

In cases of disproportion between the head and pelvis we are warned to refrain from all attempts at assistance, for fear that the contaminated condition of the canal will interfere with the safety of subsequent Cesarean section. Much work, and valuable work, has been done to show the safety of this formerly dangerous operation, but a good portion of it has been irrational, unsound, and undertaken from the wrong viewpoint, the object being favorable statistics, not good obstetrics. If a woman's previous management has been such as to be unfavorable for the success of the operation, it would appear to be far better to sacrifice the woman or her child, than to endanger the statistical showing of this noble operation.

I am glad we have men in our profession who have not become sufficiently modernized to lose sight of the fact that real progress in obstetrics must be based upon the welfare of the patient, rather than the statistics of operations performed under ideal conditions.

The only statistics of Cesarean section which are of practical interest to the obstetrician, because the only ones which deal with cases as they usually confront the operator, are those contributed by Hirst to the transactions of the American Gynecological Society two years ago.

"My experience in this operation amounts to seventy-four cases. In the last six years there have been thirty-five operations. The majority of them have been performed after twelve to twenty-four hours of labor. The only death

among the thirty-five was that of a woman operated on before labor."

In a foot note he gives three more cases operated upon before publication, making thirty-eight operations in six years, with one death, and that one, be it noted, was an elective case.

His rule is to give his multiparous women twelve hours of trial, his primiparous patients twenty-four hours, before resorting to operation, and his results show that the operation is safe, even among cases who have been frequently examined before being admitted to the hospital. There is more value in his brief paper than in all others combined, which have been published in the last decade. They devote their whole time to placing safeguards about their sacred operation. He tells us how to clean up a patient, and makes Cesarean section what it should be, a servant of humanity.

This and kindred fallacies have found entrance into obstetric literature through the work of gynecologists. I believe it would be a pity to divorce these kindred sciences. No man can be a thoroughly competent obstetrician who is not at the same time something of a gynecologist, but many of our gynecologists, with no obstetric training at all, delude themselves into believing that they are ex-officio obstetricians. Some years ago a surgeon said to me that he believed Cesarean section was the coming method of delivery in all complicated labors. "If I was called to a case of transverse presentation, I couldn't save my life do a podalic version, and would give the woman and her child a much better chance by resorting to Cesarean section."

It had not occurred to him that a man who knew nothing of obstetrics had no right to assume responsibility for the management of a case of labor. To attempt such a thing is just as criminal as for a man to attempt to do a laparotomy who knows nothing of surgical technique. It is the meddling of such men which gives us our numerous cases of Cesarean section on women who are subsequently delivered by midwives.

He who has not served his apprenticeship in actual waiting by the bedside, and watching the progress of the different varieties of labor, cannot intelligently weigh the evidence in a given case, and estimate the relative applicability and probable prognosis, of different methods of treatment.

The doctrine of the modern school of avoiding all intra-vaginal manipulations until driven by dire necessity to interfere, would if carried to its logical conclusion, rule out the obstetrician entirely, except in complicated labors, and even in

these would call for his services at a time when it would frequently be too late to do effective life saving work.

Robert Barnes years ago answered the opponents of the more frequent use of forceps thus:

"The casuists may balance the degrees of culpability of the man who, seeking to aid a woman, injures or destroys her, and of him who, trusting alone to hope, lets a woman sink into perilous exhaustion and death. The result to the victim is the same but we, weighing the men in the scales of science, may find more hope for the man who acts than in the blind helplessness of the man who does nothing. The first may improve, he may acquire judgment and skill. For the man who is tied hand and mind to a policy of waiting, there is no hope."

I fear that we will, if we listen to the voice of warning which is constantly ringing in our ears, be as those for whom there is no hope of progress. None will gainsay the fact that puerperal sepsis is more common than it should be. I see it often enough, in consultation practice, to live in constant dread of its death-like visage; but we will not conquer it by following a course of cowardly inaction, but must take the aggressive and throttle it.

Let us accept the doctrine and assume, with Williams, that the vagina is free from pathogenic germs other than the gonococcus; that when other cocci are found therein they have been carried there by the instruments of the investigator. That it is practically impossible to introduce anything the size of a finger into the vagina without contaminating it by contact with the external genitals where germs abound. Does this indicate that we must make no examinations or that we should find some method of freeing the external genitals of their germs?

Suppose that it is impossible to find a practical method of disinfecting the deeper layers of the skin—this simply means that we must not only attempt asepsis, but should use antiseptics to certify to our asepsis. Scrub the external genitals and use antiseptics thoroughly, for even if no examinations are made, lacerations may occur, one end of which will be in this infected area, and, even if in our zeal to prevent the entrance of germs we were to refrain from stitching the tear, for fear of carrying in infection, it would have a direct channel from the infected to the uninfected territory.

On the other hand, after the woman has been a long time in labor we no longer have the normal vaginal secretions upon which we have been taught to depend, and under these circumstances a thorough douching may well precede any op-

erative assistance. If everything except the hand which comes in contact with the genital canal has been thoroughly boiled and the hand is only used after being thoroughly scrubbed and is introduced dripping wet from an antiseptic solution, I believe that cases of infection following childbirth will be exceedingly rare except in cases predisposed to infection by exhaustion, shock or hemorrhage.

Exhaustion is best prevented by close attention to the management of the first stage of labor, the recognition of the false character of the pains, and their abolition before they verge into true labor, with the woman in an unfit condition for the ordeal. This presupposes vaginal examinations. Analgesics should be used to lessen the acuteness of the suffering and secure tranquility between pains.

A close attention should be given to the mechanical elements in the problem, the position of the os, uterine obliquities, etc. This again necessitates vaginal examinations.

Post partum hemorrhage is usually the direct result of exhaustion.

Shock, other than that following hemorrhage, is a pretty constant result of prolonged labor, and especially of such labors as have been allowed to progress without analgesics.

What we should counsel is not a course of supine inaction. The errors of omission are more reprehensible than those of commission. Instead of saying, "don't make examination," let us work out, each for himself, a technique which will enable him to do all that one may to assist the woman and her child and at the same time eliminate as far as possible the danger of sepsis which our efforts may produce.

There is no other department of surgery where such childish arguments would be tolerated.

Since Oliver Wendell Holmes demonstrated the contagiousness of puerperal fever almost seventy years have passed. Most of us in this room have entered the profession since Lister enunciated the fundamental principles which would lead to good, clean surgery, yet we obstetricians, instead of working out systematically a surgical technique, correcting, changing and perfecting, as errors have been made plain, have acted like boys, chasing every bright-winged butterfly of science and forgetting all else in our youthful admiration of the novel. Let us today resolve that henceforth we will each of us, without regard to creed or the lack of it, accept the motto of St. Paul: "When I was a child I spake as a child, but when I became a man I put away childish things."

If we do this we will no more have grave debates as to whether it is better to use salt solution,

or plain sterile water, in washing out the puerperal uterus. Let us discard the frills and hold fast to the essentials, and step by step will we drive back this monster which destroys or cripples the flower of our womanhood.

THE EXUDATIVE ERYTHEMAS AND THEIR VISCERAL MANIFESTATIONS.

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[Read before the Ohio State Medical Association.]

By the exudative erythemas are meant those involvements of the skin characterized in one instance by serous exudate (angio-neurotic or localized edema); in another by serous exudate plus hyperæmia (urticaria); in a third by serous exudate plus hyperæmia and hemorrhage (erythema multiforme), and in a fourth by exudation or extravasation of erythrocytes (purpura). While any one of these conditions may present itself alone, their not infrequent relationship with arthritis, or with certain serious and well marked visceral lesions, or both, renders the symptom complex interesting to internists. Still more striking is the fact that in different attacks in the same individual different manifestations or combinations may be present and give rise to varied diagnoses; at one time, purpura hemorrhagica; at another purpura rheumatica (Schoenlein's disease); at another Henoch's purpura; at another angio-neurotic edema, or urticaria or erythema multiforme, all of which diagnoses may have been correct in so far as that particular attack or diagnostician was concerned. Admitting a condition which with varied visceral symptoms there may be at one time purpura, at another urticaria, or local edema or erythema multiforme, recurrences are common, indeed are prominent features. As to internal changes, the most important are those involving the heart, as endo, and pericarditis, the kidneys, as nephritis, the gastro-intestinal crises and hemorrhages. The symptom complex then comprises a number of skin lesions, a variety of internal disorders and an arthritis of varying intensity.

The etiological aspects of the exudative erythemas are still veiled in obscurity. Symmes¹ says that "the generally accepted view is that arthritis which accompanies erythema nodosum is true acute articular rheumatism. This idea is founded on the fact that endocarditis is present in a large proportion of the cases. Mackenzie's

¹Kapost—Diseases of the Skin, Johnston's trans. N. Y., 1895, page 218.

collection, for example, included 108 cases, in 15.7 per cent of which there were definite signs of endocarditis. Other clinicians and writers have reported similar experiences. Other points of similarity are the age incidence, the fact that both seem at times to appear in epidemic form,² both have in common erythema, arthritis, endocarditis and tonsillitis. On the other hand in the exudative erythemas the temperature never runs high even when the joint manifestations are very severe, while sweating is quite rare. The response to salicylates is exceedingly feeble. The exudative erythemas have been held as angio-neuroses due to vaso-motor disturbance; as primary infections; as due to ptomaine poisoning; as dependent upon toxins from faulty metabolism; as due to local infection of the skin with bacteria. Various authors have found bacteria in the blood, as streptococci, streptococci and diplococci, micrococci, etc. In two cases of this series in which blood cultures were made, the results were entirely negative. Kaposi³ in speaking of erythema nodosum, purpura hemorrhagica, etc., is inclined to the view that in different cases there are different origins; in one miasmatic or bacterial; in another pure angio-neurosis as a reflex effect in some peculiar condition of the internal organs; or again as an auto-intoxication with toxic substances that have entered the blood as the result of internal disease.

I wish briefly to report a group of seven more or less typical cases:

Case I. Urticaria, arthritis, gastro-intestinal crisis, hematuria; recovery; recurrence. M. S., aged ten; first seen in January, 1904. Her mother states that for several years she had had attacks of nettle rash, coming on at irregular intervals, averaging about four a year, and apparently not associated with any indiscretions in diet. There was no pain in any of the previous attacks, except the last, about three months before, when she complained of pronounced discomfort in the left knee; the latter had been swollen and reddened. All this, however, had cleared up in a few days. The present attack differed from previous ones in that in addition to the eruption there was nausea and vomiting, accompanied by severe pain in the abdomen. It was for the relief of this latter symptom that it was deemed necessary to send for a physician. Examination showed a robust, well-developed girl, apparently several years older than the age given. Her temperature was 102, pulse 100, soft and at times di-

croitic. Scattered over her body with the exception of the face was a most abundant eruption of urticaria. Wheals of large size were a prominent feature. She was well nourished and apparently anything but anemic. The heart and lungs were normal. The abdomen was not distended but very sensitive on palpation, particularly in the right iliac region. Broken doses of calomel were given, followed by a saline. On the following morning the eruption had entirely disappeared, the vomiting had ceased, the bowels had moved freely, the abdominal pain had lessened very considerably, but was more distinctly localized in the right iliac region. The temperature had diminished somewhat but the pulse was still rapid and soft. The patient's improvement was rapid and in a few days she was convalescent. About six months later she had another attack with urticaria and arthritis, but without abdominal pain.

Case II. Arthritis, erythema nodosum, tonsillitis, mitral murmur, angio-neurotic edema, acute endocarditis, acute nephritis. F. M., male, aged —; entered the Cincinnati hospital on the service of Dr. Forchheimer, to whom I am indebted for the privilege of reporting the case, complaining of rheumatism. Family and personal history unimportant except that some four months previously he had an attack similar to the present, so far as the joint symptoms were concerned. Four days previous to his admission he developed pain, swelling and tenderness in most of his larger joints. He states that he could hardly move in bed on account of the intensity of the pain. He first felt soreness in his throat on the day of admission. On admission his temperature was 100, pulse 92, respiration 28. His tonsils were found greatly swollen, almost meeting in the middle line; the pharynx was reddened and inflamed. Chest and lungs normal; heart, soft systolic murmur at the apex; at base, a bruit was doubtful. The urine showed a small amount of albumin but no casts were found microscopically. April 6. The left wrist joint was aspirated and a culture made. On this date, the neck began to enlarge and the tongue became greatly thickened. This soon spread to the entire face, including the eyelids. On the same day was noted on the posterior part of the right shoulder small, reddish erythematous spots, slightly elevated above the surface of the skin (erythema nodosum). For the next few days the edema of the face, neck and throat was extreme, subsiding on the fourth day. April 12. Report was returned from the laboratory that from the fluid aspirated from the wrist joint there was cultivated a thin rod-shaped bacillus with rounded ends. This bacillus oc-

²Symmes. Boston Med. and Surg. Jour., 1907, 11—page 202.

³Symmes. British Journal Children's Diseases. London, 1907, III, pp. 281-284.

curred in chains. April 15—Edema rapidly disappearing. Pain and swelling in the joint diminishing. April 19—Edema and arthritis about gone. Acute endocarditis has developed, with great leakage of the mitral valve and considerable dilatation. The cardiac dullness extends from the right border of the sternum to just outside the left mammary line. April 22—Examination of urine shows a condition of acute nephritis with hematuria. A small quantity of microscopic blood was present after use of the centrifuge. Examination of sediment shows red blood cells, large, round cells with fatty deposit, hyaline, granular, epithelial and blood casts. May 1—Condition of heart and kidneys about the same.

Case III. Arthritis, mitral systolic murmur, purpura hemorrhagica, tonsillitis, local edema. B. C., aged sixteen, male; entered the house June 15, 1907, complaining of rheumatism. States that he has had rheumatism off and on for the last seven years, but once only of sufficient severity as to cause him to take to bed. That was several weeks ago. His temperature on admittance was 101, pulse 102, respiration 24. He was poorly developed and nourished and apparently quite anemic. Over the chest nothing abnormal was found except a soft blowing systolic murmur at the apex, and accentuation of the second sound. Examination of the throat showed a follicular tonsillitis. Abdomen negative as well as the urine. Arthritis was present, involving the ankles, knees and right elbow. Cutaneous. Scattered thickly over the arms, legs, abdomen and chest were areas of ecchymotic spots, varying in size from a dime to a pea, deep seated, plum colored and many of them fading. June 18—Blood work. Showed a mild anemia, slight leucocytosis, differential count showing increase of lymphocytes at expense of neutrophiles. June 23—No blood found in the stools (occult). Urine normal. June 28—Considerable edema with some pain and tenderness over dorsal surface of both hands. Blood examination showed marked anemia, moderate leucocytosis with differential count about the same as on previous examination. July 1—Discharged improved.

Case IV. Arthritis, purpura hemorrhagica, intestinal crisis, albuminuria, hematuria. J. T., aged twenty-one, was seen in consultation with Dr. E. S. Gates in December, 1906. His previous history bearing on the case was that for several years he had been suffering from attacks of purpura at irregular intervals, though it was thought that on the whole the average interval between the attacks was gradually growing shorter. Of late he had practically been compelled to give up his occupation so frequent were the recurrences.

Only recently had the attacks been accompanied by arthritis. Several months previously the late Dr. Joseph Eichberg had seen him and had pronounced his affection as an instance of Schoenlein's disease. At the time I saw him there was a most profuse hemorrhagic eruption, petechial in character, and involving the whole body with the exception of the hands, face and feet. Arthritis involved the wrists only. The heart and lungs were normal as was the abdomen. There was a history of severe abdominal cramps at the beginning of the attack, lasting but a few hours. The urine showed a small amount of albumin and microscopically a few casts and a small amount of blood. I saw him but once.

Case V. Arthritis, erythema multiforme, purpura hemorrhagica, acute nephritis. C. M., aged thirty-seven; by occupation, iron moulder; entered the house June 13, 1907, complaining of rheumatism. Family history is without bearing on the case. Personal history: He has had little or no illness until two years ago, when he began to be troubled with joint pains, particularly in the ankles. His present illness began two weeks ago with pain in his ankles so severe that he had to keep to his bed. Three days after the onset he noticed deep red spots on his legs. There was no itching. Pain becoming more severe and also involving his wrists he was compelled to come to the hospital. Temperature on admittance 98.6, pulse 84, respiration 24. Patient is an adult white male, well developed and nourished, though quite anemic. Heart and lungs normal. Liver and spleen not enlarged. Arthritis involving both ankles and both knees (complains of pain in both hips). The tongue is coated, appetite poor, constipation complained of. Urine normal chemically and microscopically. Cutaneous system; scattered over the arms, legs, abdomen, back and chest are ecchymotic spots, varying in size from a dime to a dollar. Most of these are faded and brownish, but some of those upon the legs are more recent, of a deep red color. The hemorrhagic eruption is most marked about the joints. On the legs are patches of erythema multiforme. No urticaria present. June 17—Old cicatrices on legs, from burns, are seat of hemorrhagic extravasations. Erythema multiforme more marked. June 22—Blood work; hemoglobin, 80 per cent; reds, 2,212,000; whites, 3000; small lymphocytes, 18 per cent; large, 5.5 per cent; transitional, 4.5 per cent; eosinophiles, 4 per cent; mast cells, 1 per cent; neutrophiles, 67 per cent. June 28—Blood work; hemoglobin, 82 per cent; reds, 2,300,000; whites, 3200; small lymphocytes, 14 per cent; large, 9 per cent; transitional, 9 per cent; mast, 2 per cent; polys, 66

per cent. Marked hematuria has developed. Urine, cloudy, of port wine color, containing a large amount of albumin. Microscopically, granular casts and blood cells are found in large numbers. August 1—Urine as above described and scanty in amount. No blood in stools (occult test). August 8—Occult blood test on stools negative. Blood work; hemoglobin, 85 per cent; small lymphocytes, 16 per cent; large lymphocytes, 7 per cent; transitional, 5 per cent; polys, 70 per cent; mast cells, 2 per cent; red cells, 3,320,000; whites, 4800. Patient had been allowed to leave his bed several days ago; today erythema multiforme again appeared. No blood in urine, though still albumin and casts; no fever. Note: On appearance of acute Bright's diarrhoea appeared and continued. August 18—Discharged improved.

Case VI. Arthritis, purpura hemorrhagica, erythema multiforme, vesiculation. M. M., female, age forty-six; entered the house June 16, 1907, complaining of rheumatism. Her family history was of no importance in the development of the case. Personal history: she has never had a serious illness; has had no rheumatism previous to the present attack. The onset of her present illness began on the morning of June 15, suddenly, with fever and great weakness. Her wrists and fingers were reddened and sore and stiff. She also had a sore throat. On admission, temperature 100, pulse 102, respiration 26. Her throat was greatly reddened and the follicles of the tonsils were filled with pus. Face was pale and sallow and mucous membranes anemic. Chest rather thin, heart and lungs normal. Neither liver nor spleen enlarged. Extremities: ankle and knee joints inflamed; scattered over both legs from the upper portion of the thighs to the ankles are petechiae and ecchymotic spots varying in size from a pin head to a pea, dark red in color and not disappearing on pressure (purpura hemorrhagica.) (Patient states that these spots came on after the development of the joint swellings.)

The metacarpo-phalangeal joint of the ring finger on the left hand was inflamed and about it was an eruption of small papules and vesicles. Same condition was noted in right thumb. A few petechiae were scattered over the arms but none on the chest or back. There were no intestinal symptoms except anorexia and constipation. Nothing abnormal was found in the urine. June 19—Blood work; hb., 80 per cent; reds, 3,250,000; whites 10,000; neutrophils, 77 per cent; small lymphocytes, 8 per cent; large lymphocytes, 6 per cent; transitionals, 4 per cent; eosinophiles, 3 per cent; mast cells, 2 per cent. Joint and skin

symptoms much improved. Occult blood test of stools negative. June 24—Discharged, well.

Case VII. Arthritis, intestinal crisis, purpura hemorrhagica, local edema, pleurisy with effusion, mitral insufficiency and stenosis, peri-articular edema, chronic nephritis, erythema multiforme, acute endocarditis, dry pleurisy. J. W., aged thirty-eight; entered the house June 4, 1907, complaining of rheumatism. Patient states that he has been laid up several times recently for about a week at a time with abdominal cramps. At age seventeen, he had acute inflammatory rheumatism, and was ill six weeks. Seven years ago he had a severe attack of rheumatism, and was confined to the hospital for over five months. Has had no sickness from that time until the onset of the present attack. The onset was three weeks ago with severe pain in the abdomen (cramps), colicky in character. The abdomen was distended and he vomited several times. This attack followed a severe wetting. He was in bed for four or five days, and feeling better, got up and went to market (by occupation he is a huckster). While at work his hips became sore and stiff and he was compelled to return home. Next morning his hips were sore and tender, as were his ankles. The ankle joints were swollen and reddened. Around the ankles were noted reddish purple blotches. On the following day he noted that with the blotches was another kind of eruption that looked like hives and which itched and burned. He became gradually worse during the next few days, the purplish blotches becoming more numerous and extending to the abdomen. Wrists and hands also became swollen and the blotches appeared on the arms. His temperature on admission was 99.2, pulse 120, respiration 30. Patient was an adult white male, well developed and nourished, but apparently anemic. There was great swelling and edema of the eyelids and cheeks. The cervical lymph glands were somewhat enlarged. Chest, lungs: Dullness, distant breath sounds and diminished tactile fremitus at the right base posteriorly; otherwise normal. Heart was somewhat enlarged transversely. Systolic and presystolic murmurs were present at the apex. Abdomen slightly distended but not tender. Liver extended one-half inch below the costal border. Spleen apparently not enlarged. Extremities: On entrance the knees and ankles were inflamed and reddened, painful and tender. At the upper and inner aspect of the right knee there was considerable edematous infiltration of the peri-articular tissues. Gastro-intestinal: Fauces and pharynx show chronic inflammation. Tonsils scarred and atrophic; no appetite; marked constipation; no blood in the stools.

Urine was diminished in amount, clear, acid, amber, 1021; slight albumin; no sugar, granular and hyaline casts; one epithelial cast; no blood. Nervous system: Cerebration slow; speech thick and with some difficulty; cutaneous; on the legs are purpuric spots (ecchymoses) varying in size from a pea to a dollar. Some were faded and brownish; others purplish and more recent. Erythema multiforme on thighs and legs, chiefly about knee joints. On arms, back chest and abdomen were ecchymotic spots, brown and faded. Face and neck were free from eruption. Nutrition: Fairly large amount of subcutaneous fat present; tissues soft and flabby, apparent anemia.

June 6—Blood work; hb., 90 per cent; reds, 4,400,000; whites, 8600; neutrophiles, 72.5; small lymphocytes, 18.5 per cent; large lymphocytes, 7 per cent; transitionals, 2 per cent; eosinophiles and mast cells, none. June 9—Pleural effusion on the right side has increased; dullness extending to one and one-half inches below the angle of the scapula. Grocco's sign marked. Blood extravasations on legs have almost disappeared. June 15—Blood work; hb., 85 per cent, reds, 2,500,000; whites, 5200; neutrophiles, 74 per cent; small lymphocytes, 12.5 per cent; large lymphocytes, 3.5 per cent; transitional, 5 per cent; eosinophiles, 6.5 per cent; mast cells, 0.5 per cent; a few myelocytes. Pleural effusion about the same. June 23—Several metacarpo-phalangeal joints and finger joints of both hands red and inflamed; no skin eruption. June 28—Improvement. Hb., 85 per cent; whites, 5600; reds, 3,325,000; neutrophiles, 66 per cent; small lymphocytes, 16 per cent; large lymphocytes 13 per cent; transitional, 2 per cent; eosinophiles, 3 per cent; mast cells, none. June 29—Examination of urine still shows albumin and casts; no blood.

July 2—Temperature rose suddenly coincident with inflammation of ankles and fingers. Liver palpable two inches below the costal border. July 3—Urine diminished in amount; contains albumin and casts. Small amount of fluid in peritoneal cavity (succession wave and movable flatness). Condition of heart has suddenly changed. In place of a presystolic and systolic bruits, there is a loud musical systolic murmur heard best at the apex and transmitted to the axilla. Heart is enlarged and there is considerable dyspnoea. Blood work shows little change. During the next two weeks the endocarditis was accompanied by mild septic fever, the temperature ranging from 98 to 101. On July 15 the note was made that a pleuritic friction rub had developed in the left mid-axillary line, but that there was no fluid; also that the fluid had disappeared from the right pleura. On July 21 there was one last flare up

in the hand and finger joints. The patient now began to gradually mend and was discharged August 30. At no time in the house was there edema of the feet or scrotum.

Analysis of these seven cases shows (1) that in five arthritis was present and that in the two remaining arthritis had been present in previous attacks. In not all cases of this affection is there an arthritis, nor indeed any joint involvement. Occasionally there is synovitis or periarticular inflammation, as in case VII of this series. Yet one cannot but be impressed with a relationship to articular rheumatism, particularly as there was in several instances a preceding or coincident tonsillitis. All of the cases with arthritis had fever, though in no instance did the elevation of temperature assume any particular importance. Sweating, so prominent a feature of rheumatism, was not present in any of these cases. (2) That eruptions were present in considerable variety. In all but two there was purpura hemorrhagica; in three, localized edema; in one, urticaria; in one, erythema nodosum; in two, erythema multiforme; in one, vesiculation. In several of the cases different cutaneous manifestations occurred at the same time; in others there were different eruptions at different attacks. (3) We are of course particularly concerned with the visceral lesions which are often of the most serious character. In the present series there were two cases of acute endocarditis, in both of which the acute inflammation was probably engrafted on old organic lesions. In two cases there was acute nephritis and in two others, hematuria; in one case there was chronic nephritis from the onset and while the urine at times became diminished in amount and smoky in hue, no blood was found. In three cases there were abdominal cramps, in one of sufficient severity as to suggest some severe internal inflammation. In one case there was pleurisy with effusion, followed by dry pleurisy on the opposite side. Blood work: In four cases blood counts were made, in all, at least twice. In but one was there an anemia of any severity (Case 5), and then only after a recurrence of an arthritis that strongly suggested acute articular rheumatism. Among other internal disorders may be mentioned the case recently reported, in which there were well marked nervous manifestations simulating meningitis, including severe headache, photophobia, semi-coma, retraction of the head, imperfect Kernig's sign, and clear, non-bacterial fluid on lumbar puncture. Osler, who, so far as I know, was the first to call attention to the importance

⁴—Boston Medical and Surgical Journal, 1908. CLIX, p. 305.

of the internal lesions, and who has made the most noteworthy contributions to the subject, reports, among a variety of lesions, several instances of peri-carditis.⁵

One word more concerning the surgical aspect of the exudative erythemas. The crises of abdominal pain are perhaps the most common of the internal manifestations. In twenty-five of the twenty-nine cases reported by Osler they were the most prominent feature. This complication was present in three of the seven cases of this series, in one of such severity as to suggest appendicitis. Coming on as do these attacks of pain in any portion of the abdomen, of great suddenness and intensity, it would be strange indeed if laparotomy had not been given serious consideration. If in addition blood were passed per rectum, the diagnosis of intussusception could not be looked upon as unreasonable, particularly if the victim were a child. Burrows (British Med. Jour., Chil. Dis., Vol. 1, No. 1) reports just such a case in which laparotomy was performed. Sutherland (*ibid.*) reports a similar case with laparotomy and another in which no operation was performed. Osler mentions an instance in a young girl (Am. Jour. Med., Sci., Jan. 1904) in which an explanatory incision was made in the upper abdomen. Other instances are not wanting in the literature. Operation has brought out the fact that the internal lesion in these cases is an infiltration of the intestinal wall with blood and serum, a condition practically similar pathologically to some of the skin phenomena. The surgical point is that in considering operation for abdominal crises, attention should always be paid, particularly in children, to the condition of the joints and the whole surface of the body examined carefully for possible exudative erythema.

DISCUSSION.

E. W. Mitchell, Cincinnati: These cases are very interesting. These results have been looked upon as closely associated with rheumatism if not due to rheumatism itself. Now we use the term "rheumatism" in a different sense from what our forefathers used it, and we have, possibly, a more definite conception of what we mean by rheumatism. Nearly all these cases had arthritis associated, and these exudative erythemas frequently have these symptoms.

The orthopedists have recently taught us that the different forms of arthritis of the infective type are often due to concealed infection, and by removing the foci of infection somewhere in the body, as the tonsils or appendix or curing a lesion in the intestinal canal, the symptoms disappear. Probably all the cases Dr. Brown has reported are such as would clearly suggest bacterial infection. We have endocarditis, etc., that

show they belong to some form of infection. We have different forms of infection which produce this class of cases. We have those associated with a true articular rheumatism which depends on specific infection, and those associated with various infections. We cannot doubt that we have these erythemas associated with toxic infections from the intestinal canal, because they are frequently associated with persistent constipation and intestinal disturbance. We have a close connection between the trouble in the abdominal organs and the conditions in the skin.

I think we should clearly fix in our minds the surgical importance of these crises. Dr. Osler reports nine cases in which abdominal action has been made. He divides the cases into five groups, and speaks of three groups which have special surgical relationship; those in which we have ——— in connection with angio-neurotic edema; those with arthritis, and those recurrent ——— with nothing else that is present. So that where symptoms are not entirely characteristic of appendicitis, it is well to bear in mind the possibility of having a crisis without accompanying skin lesion. In these cases all the features should be carefully examined. We find a less marked rigidity of the abdominal wall, and the blood examination gives different results.

Dr. Levison: I would emphasize what Dr. Mitchell has said about the relation of these conditions to infection. In place of considering these various diseases as being separate clinical entities, we should endeavor to determine their bacterial cause, as only in that way can we determine the condition. I have recently followed two cases, one associated with spots all over the body, also haemorrhagic bullae where we were able to determine a septicæmia, that went on to fatal termination, and this was undoubtedly the cause of the purpuric condition.

In another case of purpura haemorrhagica, so-called, I was not able to determine any infection, even after repeated blood cultures, but the blood never showed any of the eosinophile cells. Simon has observed that the cells are practically absent from the blood in these cases.

Dr. Tracy, Toledo: I am not a nose and throat man, but in those cases where there was a tonsillitis, I wonder what the effect would have been if the tonsils were removed; whether the disease would recur, or does recur after the removal of the tonsils.

Dr. Frye, Cleveland: I have been working in nose and throat for many years, and there have been a great many cases of infection of the joints under my observation, the infection starting as a tonsillitis and afterwards entering the various joints.

I was called to see a young lady two months ago, after a submucous resection. She was sick and had a marked haemorrhagic condition covering the whole body. Some of the spots were as large as a dime. She started in with a sore throat, following this submucous resection, the fifth or sixth day. The family physician saw her, and later I was called. Of course she may have taken cold after the operation. She had a number of joints swollen and a typical case of arthritis.

The thing I want to call attention to is that in the majority of cases of follicular tonsillitis there

⁵Osler, Amer. Jour. Med. Sci., Dec., 1895; Jan., 1904; May, 1904; Jacobi Festschrift, 1900.

is a condition, probably not rheumatism, but the same condition of the blood which caused the tonsillitis caused the rheumatic condition. There is no question but that the follicular tonsillitis antedated the rheumatic trouble. You get results often with anti-rheumatic treatment, which I have followed for years with good results. In the majority of cases it is a rheumatic condition which does not need local treatment, but is promptly relieved by anti-rheumatic remedies.

Dr. Brown (closing): I am in accord with what has been said in regard to this trouble, particularly Dr. Mitchell's statement that there are probably different causes back of these peculiar eruptions. The picture we get of inflammatory rheumatism is I think too strong to be a mere coincidence. We know the subject of rheumatism is still somewhat in chaos, and we are not all agreed on its strict bacterial origin.

In most, if not all the cases I reported, there was marked or persistent constipation. It appeared to me that when the constipation was removed the patient seemed to get better, showing there was some relation between the auto-infection and the lesions.

Some one spoke of blood examinations showing something etiological in the cases. In those of our cases in which blood cultures were made the results were negative. There are numerous cases in which various organisms have been found and isolated, and it is probable there is in a certain proportion of these cases infection from micro-organisms rather than toxins. He spoke also of the fact that eosinophiles do not occur in purpura. In one of our cases there were no eosinophiles, but a week later there were $6\frac{1}{2}$ per cent about them. I agree with him that we know very little about this eosinophiles as to why it occurs in asthma, for instance, or trichiniasis.

With regard to the effect of tonsillitis, it seems to me very true that we have entrance of various poisons of different kinds through the tonsils. Many of us believe that is the portal of entrance of many diseases, and that removal of the tonsils is a most important prophylactic treatment for infection of all kinds.

HEMATURIA—A CLINICAL REPORT.

WILLIAM E. LOWER, M. D.,
Cleveland.

[Read before the Ohio State Medical Association.]

In presenting this clinical report on hematuria, I am considering only such cases in which the blood is apparent to the naked eye, and not cases in which red cells are often found microscopically.

Blood in the urine is only a symptom and not a disease, and until the profession recognizes it as such, we shall be unable to diagnose early and treat correctly a large number of surgical diseases of the urogenital tract until too late for any benefit. Because the hemorrhage is painless and intermittent, it does not mean that the cause producing it is not a grave one and deserving of the

most radical measures if we desire to accomplish a cure. True, in a considerable percentage of cases, the exact cause cannot be determined—but the source, whether in urethra, bladder, ureter, or kidney, can be determined. Even in these cases we must determine the fact rather than guess at it, since means are at our command for so doing.

The causes of hematuria are many and varied. This report does not include all the causes that may produce blood in the urine, but only such as have come under my personal observation and represent, I believe, quite the majority of causes. The various surgical operations for the relief of many of the conditions producing hematuria herein described will not be considered in detail in this paper.

This report represents 204 cases which have been examined because of blood in the urine. Bleeding was first observed by the patients themselves, and in the majority of the cases only accidentally, for, in the large proportion of cases the bleeding was painless, and herein lies the danger, for after the scare of the first sight of blood in the urine, little attention is paid to the symptom, and if the bleeding ceases no further attention is given to it and no doctor consulted until another attack comes on. Even then, if the physician is not insistent on a thorough examination, the case is further postponed until grave, alarming symptoms present themselves. Many of these cases present truly a pathological disharmony, the disease being out of all proportion to the symptoms—as in cases of invasion of the cervix uteri by cancer. When pronounced symptoms appear the case is generally beyond a cure.

Classification—There were 141 males and 62 females; about twice as many men as women. After deducting the prostatic cases and most of the vesical calculi, other conditions producing the bleeding were about equally divided in regard to sex.

Age—The oldest case was eighty years; the youngest fourteen months; average, forty-three years.

Social Condition—There were 93 married men and 33 single. There were 49 married women and 13 single. Social condition not given in 13.

Occupation—Physicians, 5; retired, 3; merchants, 6; cigar maker, 1; farmers, 15; laborers, 14; office work, 3; railroad work, 7; barber, 1; banker, 1; stenographer, 1; machine hand, 1; peddler, 1; engineer, 2; salesmen, 5; mechanics, 11; agents, 6; ministers, 2; tailors, 2; janitor, 1; nurse, 1; telegraph operator, 1; molder, 1; blacksmith, 2; fireman, 1; students, 2; painters, 3; clerks, 5; houseworkers, 50; tanner, 1; porter, 1.

It will be noted that the non-professional domi-

nates, but there seems to be nothing in the occupation predisposing to conditions producing hematuria.

Duration and Amount of Hemorrhage—The longest time from the appearance of the first hemorrhage to the time of examination was sixteen years; the average period being from one to two years; the amount varying from small clots to a profuse hemorrhage, causing pronounced anemia.

Symptoms—Aside from the bleeding there were no uniform symptoms to indicate the source and cause.

Diagnosis—A careful and complete history of a case, with an intelligent interpretation, will occasionally reveal the source and cause of the bleeding; e. g., a history of the ingestion of certain drugs, large doses of turpentine, a blow, kick or fall on the kidney, a tumor of the kidney, an enlarged prostate, an introduction of some foreign body into the bladder, and *hereditary* history of hematuria as cited by Guthrie, Atlee and Aiken.

Guthrie reported hematuria in twelve members of the same family, the inheritance through the females only. Aiken reports seven cases representing three generations. Atlee three cases in one family.

The most positive and classical physical signs will often be misleading. Occasionally when I have felt sure from the symptoms present that the bleeding was from a kidney, the true source has been from the bladder, and vice versa. So the only positive and absolute way of making a correct diagnosis of the source of the bleeding is by the use of the cystoscope and ureteral catheter aided by the X-Ray in kidney and ureteral stones.

Of the causes found in this series which produced hematuria the greatest number was due to tumors of the bladder—twenty-seven in all, sixteen of which were benign and eleven malignant. In all but two of the cases the only symptoms for a long time was the bleeding, and not until infection occurred or the tumor trespassed upon the ureteral orifice was there pain. There is no doubt that most of the malignant cases started as benign papillomata, and had they been diagnosed early and proper surgical treatment instituted all would have recovered. The prognosis of malignant tumors of the bladder is generally very bad. Although I have two cases upon which I operated in which there has been no recurrence in more than three years. Removal of the papillomata if seen early has been uniformly good. In a few cases there has been a recurrence, but a second operation has not been followed by recurrence.

In operating these cases, it has been my cus-

tom to open the bladder, make a clean excision and immediately close the bladder. In all but a few of the earlier cases there has been primary healing and the patients have been up and about in ten days or two weeks.

Next to this the most frequent cause has been cystitis—twenty-two cases—the cause of cystitis being gonorrheal infection in the majority of instances; in others mixed infection. Vesical calculi caused bleeding in fifteen cases. In a majority of these cases the sound had been used and no stone detected, the cystoscope finally clearing the diagnosis. All but two were removed suprapubically and the bladder immediately closed. Renal calculi was the cause in fourteen cases and in this class the X-Ray is absolutely indispensable for the positive diagnosis. Injury to the kidney caused hematuria in ten cases and in only two was surgical intervention necessary.

Tuberculosis of the kidney and bladder caused bleeding in seventeen cases, and in the uni-lateral cases of renal tuberculosis nephrectomy gave prompt relief, two of the cases being well after seven and nine years, respectively.

Of other causes, upon which I have not time to dwell, eleven were from prostatic hypertrophy, six from malignant growths of prostate, five from nephritis, six from ulcers of the bladder other than tuberculosis. Sarcoma of the kidney, four; endothelioma of kidney, one; horseshoe kidney, one; pyonephrosis, one; urethral polyp, one; malignant growth of urethra, one; urethral stricture, one; pyelitis two; pyelonephritis, two, post typhoidal hemorrhage, one; ureteral stone, three; pregnancy, one; cysts of kidney, three. In the cases of cystic kidney two were unilateral and one bilateral. The unilateral cases were cured by operation. The bilateral case was, of course, inoperable. This case is especially interesting, for it had been treated for papilloma of the bladder for a considerable time. A cystoscopic examination disclosed blood coming from the left ureteral opening. A physical examination revealed two large tumors extending down to the crest of the ilium on each side and the multiple cysts could be distinctly felt through the abdominal wall. This patient is a young man, age thirty-two, and it is to be regretted that nothing radical can be done.

There were five cases which were demonstrated by operation as belonging to the so-called class of essential hemorrhage of the kidney. No other class has been so widely discussed as to the real cause. Recently investigators have been finding changes in the kidney which account for this mysterious bleeding. Angioma of the papilla has been found to be the cause in a number of

cases described by Fenwick, McGowan, Pilcher and others, and treatment applied to the papillæ has stopped the bleeding. Recently Billings has reported a few cases treated by the auto vaccines, finding the cause due to the colon bacillus. Others believe the cause to be tuberculosis and treat accordingly. The most frequent condition found, however, is nephritis..

Of the five cases in this series which I have seen, all were operated. In three nephrotomy was done and in two nephrectomy. In the two kidneys removed, microscopic findings showed slight evidence of nephritis. In two of the nephrotomies nothing demonstrable was found. In the third case there was bleeding from a papilla in the upper pole of the kidney, but no operation was directed to it, as it was thought to be accidental, and the bleeding soon stopped after sponging a few times; the kidney was closed and there has been no recurrence of the bleeding since. In all three cases of nephrotomy the bleeding stopped following the operation, and so far as I am aware, there has been none since. The nephrectomies were done because of the critical condition of the patients, each being so reduced from the bleeding that the hemoglobin in one was thirty and in the other forty-five; both immediately recovered and have been entirely well since. In one, a preliminary transfusion of blood was done, which made the case a perfectly safe risk and hastened the recovery.

I am of the opinion that, if a careful and thorough histological examination could be made in all these cases, an alteration could be found to account for the bleeding. The cause is probably not the same in all cases.

There still remains in this series twenty-two cases of bleeding from one or the other kidney that so far I am unable to classify. In several of these cases, I saw the patients but once, but could clearly demonstrate the bleeding from the kidneys. I am certain that a number of these cases belong to the class of so-called essential hemorrhages of the kidney.

In one of these cases, No. 97, the bleeding has been noted for more than sixteen years. Three years ago I made an examination and found blood coming from the left kidney. The patient, a man age sixty-three, had become much reduced from the continuous bleeding. He was sent to the hospital preparatory to an exploration of the bleeding kidney. In order to determine the condition of the other kidney, I catheterized both ureters, passing the ureteral catheters well up to the pelvis on both sides. Having found the other kidney in apparently good condition, I decided to operate on the bleeding kidney. To

the great surprise of the patient, as well as of myself, the bleeding ceased from the time of the catheterization of the ureters. We waited a few days, hoping the patient would improve, knowing that a few days without loss of blood would be advantageous. He gained in strength and spirits, and I lost in courage, for without the bleeding there was no special reason for operating. After a week, there being no recurrence, the patient was allowed to return to his home. There was no recurrence of the bleeding for two years, but recently there has been some bleeding, however, not so profuse as before. Whether the simple passing of the catheter was responsible or whether it was merely a coincidence, I am unable to say.

Hagner has reported similar cases. Young reports cases checked by the injection of adrenalin. In another case, where the bleeding had been present almost continually for two years, and had been demonstrated to be coming from the right kidney, it stopped suddenly without any intervention and did not recur for a year, recurring since that time only at intervals. In a third case of this series, a physician has had a bleeding from his kidney for a number of years; never any pain; occasionally ceasing for months at a time, then recurring. So far no cause can be found; X-Ray negative.

Other cases might be detailed, but as none of them came to operation, I cannot properly classify them, but believe they belong to the same class as the so-called essential hemorrhages.

From an analysis of this series it will be noted that of more than 75 per cent of the cases of hematuria, the cause has been due to some demonstrable lesion and in nearly all of them amenable to treatment and cure.

The importance, then, of a thorough and complete examination by every means at our command is imperative if we expect to do the right thing by our patients. As Lewis has well said, the giving of a styptic that would effect a stopping of the hemorrhage and thereby preclude a complete examination, would be most unfortunate, for many cases would be carried along beyond the most favorable time for safe intervention. It could well be compared to the giving of opiates which would mask the symptoms in a case of acute appendicitis.

From the clinical report it would seem that the following deductions are warranted:

1. Hematuria is, in the great majority of cases, unaccompanied by any physical signs which would lead to a diagnosis of the source and cause of the bleeding.

2. Blood in the urine is only a symptom, and

with few exceptions indicates a serious pathological lesion somewhere in the uro-genital tract.

3. Illumination of the bladder and ureteral catheterization are the best means for determining the source of the bleeding, and aided by the X-Ray in doubtful kidney cases, the cause can nearly always be determined.

DISCUSSION.

George Goodhue: I was greatly interested in this paper because it is decidedly a practical one, and I will mention briefly a case that came under my observation a couple of years ago, where there was hematuria that, it was ascertained, came from the right kidney by a Harris segregator, and the kidney when examined by operative measures was found to be entirely misshapen and very greatly enlarged. The patient was the wife of a physician, who was present at the operation, and we concluded it was wise to do a nephrectomy, and we did so. The kidney was afterwards given to a pathologist, who reported that he did not find any pathological congestion. I would like for Dr. Lower, if he can, to throw some light upon this case.

I want especially to emphasize the use of the cystoscope. It was demonstrated very decidedly in a case I referred to Dr. Lower some years ago, a man who had been treated for four years for hematuria, without any diagnosis being made. In this case Dr. Lower reported there were two tumors in the bladder, one situated at the orifice of the left ureter, and the other, a very small one, at the neck of the bladder, both of the papillomatous variety. The bladder was opened, and the two tumors removed. The one at the neck of the bladder, that I am confident, had it not been for the cystoscopic examination prior to operation, it would not have been detected, and would have been left in the bladder to give future trouble. That man is thoroughly well today. I simply mention this case to emphasize more fully the desirability of a positive diagnosis being made when possible by means of the cystoscope prior to operation.

Wm. E. Lower, Cleveland, (closing): Dr. Lower read a few pages from his paper to explain the cases Dr. Goodhue referred to.

1021 Prospect Ave.

NON-OPERATIVE TREATMENT OF OTITIS MEDIA.

W. L. CARROLL, M. D.,
Youngstown.

[Read before Ohio State Medical Association.]

Since the vast majority of suppurative conditions involving the middle ear have reached a chronic condition long before they apply to the specialist for relief, these few remarks on the non-operative treatment of otitis media will apply more particularly to chronic cases.

While it is not the province of this paper to

go into the etiology of the affection, or to quote authorities or statistics, it is necessary in order to clearly set forth the author's theory and practice, to state that his belief is, that almost all cases of otitis are of nasal origin, and hence, if we desire to achieve permanent results our efforts must be directed largely to a correction or amelioration of those causes, such as chronic nasal catarrh, hypertrophic turbinates, septum deformities, adenoids, hypertrophied tonsils, etc., before we can achieve much success in curing the chronic otitis.

If the active factors in the production of any disease are left undisturbed, it is most reasonable to believe that they will eventually defeat any measures that may be taken to alleviate conditions of which they stand in the relation of cause to effect.

It has been my practice for some years back to make a careful examination of the nasal cavities on the first visit and if any abnormalities are found there, to insist on their correction as a preliminary step to the relief of the chronic ear discharge. The reason for this view should be sufficiently plain to any one having a fairly good understanding of the anatomical relations of the parts, as to preclude the need of much argument in its favor.

Having attended to the nose and nasopharynx, our attention is next directed to the ear proper. If, as is usually the case, a sufficiently large opening is found to exist in the tympanic membrane to permit of free drainage and ingress and egress of the antiseptic fluids used in cleansing, we begin these measures at once. If the opening consists of only a pinhole or narrow slit, however, we do not hesitate to enlarge this at once, for success here, as everywhere, depends on free drainage and thorough cleansing.

The cleansing solution is a one to two thousand bichloride made as warm as the patient will stand, and of this about one-half pint is used at each treatment.

It might be well to say a word about ear syringes. I have tried several kinds of syringes and other contrivances for washing out the middle ear, but have not found, as yet, anything to equal an ordinary hard rubber syringe, holding from one-half to one ounce. This being light, is easily handled, can be directed accurately, and with it sufficient power can be obtained to force your cleansing fluids into every accessible part of the tympanic cavity.

After a thorough cleansing with the above mentioned fluid the ear is carefully dried out with cotton-tipped probes and then with the patient's head held on the side, supported by his hand

usually, I fill the ear with a one to five hundred bichloride solution in alcohol. This last procedure generally causes pretty severe pain which subsides almost immediately, when the solution is allowed to run out again.

The object of the last procedure is not only to obtain the maximum antiseptic effect of the bichloride, but also the very important germicidal action of the alcohol as well. This completes the treatment, which is repeated every other day.

For use at home, the patient is directed to secure a suitable syringe and is provided with a quantity of the 1-2000 solution with instructions to first wash out the ear thoroughly with several syringefuls of warm water and finish with one or two syringefuls of the bichloride.

The time necessary to effect a cure, where a cure is possible, by the use of medicines alone, varies from two to six months, and after the latter period has elapsed, if the discharge continues unabated or very little diminished, I despair of succeeding in this way and inform my patient that a radical operation is the only hope of complete and permanent relief.

In conclusion we desire to state that there is no thought of claiming originality in the choice of remedies or the manner of their application, but I would like to emphasize the importance of the preliminary nasal treatment as being, in many cases at least, essential to success. There likewise is no claim made that all cases of chronic otitis can be cured by this or any other form of non-operative treatment, but from the very fact that most of your cases will not entertain the suggestion of so formidable an operation as the one necessary to thoroughly eradicate the infected areas. I believe that no one is justified in pronouncing any case incurable until he has given these, or other somewhat similar measures, such thorough and long continued trial as to fully convince him of the futility of any further efforts along those lines.

DISCUSSION.

Dr. Grosvenor: I have had a great deal of trouble with the middle ear syringe for a good many years, and I have never found as satisfactory a device as the small canula of a Colburn middle ear syringe. With this one can draw up four or five drops of nitrate of silver, or any desired solution, and may know just what he is doing.

Dr. Stevenson: I think it is quite generally recognized that the treatment of diseases of the ear is very largely the treatment or removal of the underlying, direct or indirect, nasal or nasopharyngeal causes. I prefer mild to strong irritating solutions. The numerous kinds of ear drops employed by various physicians suggests that no one drug or strength of solution has proven of special service, and one will have to

prove its pre-eminence before it will be generally adopted.

Much depends on the nature and duration of the discharge whether a mildly alkaline or antiseptic solution should be used. In acute cases for a short time, I ordinarily employ 6 to 12 per cent carbolic acid in glycerin solution. In chronic cases a saturated solution of boric acid in 25, 50, or 75 per cent of alcohol in water is my favorite.

In the use of the catheter in cases with discharging ears great care should be exercised that the tip of the diagnosis tube should be sterile, and not serve as a medium to convey infection from one ear to another, especially in different people. Jansen's ear tips are too heavy to be readily retained in the ear. Glass or aluminum tips serve better. I use infants' rectal syringe tips with smaller end shortened about one inch. These stand an ordinary amount of boiling, and as they cost but little, two or three dozen should be placed on a convenient tray.

Everything possible should be done to promote free drainage. Probably every otologist has noted the beneficial effect of gauze drainage in the ear, especially after mastoid operations. As it is expensive and unnecessarily troublesome to the patient to make two daily trips to the otologist's office to have the gauze packing changed, I cast about for some simple method whereby the patient could change the dressings himself. Small cylindrical drains composed of gauze and cotton were tried. The gauze drain was too stiff, hurting the patient to introduce it; the cotton was not stiff enough. I now employ drains composed of cotton wrapped in gauze made for me by Johnson & Johnson, giving just the right amount of stiffness. They are used along with other treatment by the patient day and night, or only at night, depending on the case; never removing them oftener than twice each day. A little piece of gauze which may be changed when saturated is placed in the outer ear to hold the drain in place and take up the excess of drainage.

My associate, Dr. Weaver, has employed autogenous bacterins in a few selected cases with seemingly excellent results, but our experience with vaccines is not large enough to be of value.

Dr. Thompson: I have been listening to the discussion of this paper with a great deal of interest. There is one noticeable point in the discussion that I think should be brought to the attention of the section, and that is our absolute failure to study the therapeutics of the mucous membranes of the ear, nose and throat. We are perfecting our operating methods but we are not making an intelligent use of remedies for the treatment of local conditions in these organs. The author of the paper speaks of cleansing an ear in purulent otitis media with a bichloride solution. The bichloride solution, in common with all other antiseptics, coagulates the albuminoid constituents of the pus and makes their removal from the ear much more difficult. If the doctor would use an alkaline solution first, preferably a 2 per cent solution of sulphate of soda, to liquify and dissolve these secretions, they would be much more easily removed from the ear and his later treatment with the bichloride solution would be much more effective.

Dr. Fry: There are one or two points that

occurred to me in my experience in cases of this character. In the first place, the solution the doctor uses is very much stronger than the solution of bichloride that I use. I use a 1-5000 or 1-10,000 solution, and consider it much better where the ear is filled with epithelium and perhaps the matter has been there for years. I have found many cases where the opening is very small and high up; perhaps the opening is not more than one-fifteenth of an inch. It is very hard to get patients to submit to enlarging the opening, but you can get in even with a one-tenth or one-fifteenth of an inch opening with a little curved point of the syringe, and with patience and perseverance, you can get out quantities of the epithelium that has been packed away for years, and I want to say that you will rarely treat your patient for six or even three months if you will persist in that method of treating him, because you will get him well if there is no bone or mastoid involvement. I have seen those cases that have been in existence for fifteen years get absolutely well in three treatments. But it takes a treatment of possibly three hours, and you have to use a great deal of perseverance and use your syringe with a little curved tip as long as you get anything but clear water. Then put in your two or three drops of absolute alcohol, and I think the bichloride is unnecessary. After you get that thoroughly clean you will do more by simply throwing water in the ear canal, especially in small openings. I think any man that will insist on a mastoid operation before this conservative method has been used is not doing by the patient as he would be done by, because the experience of the best operators is that a large percentage of these cases are very dangerous and the death rate high. I think the method that we should all pursue is the conservative method in the majority of these cases.

Dr. Chamberlain: I think Dr. Fry's emphasis of the importance of attic irrigation is right, but I believe if he attempted to wash certain cases in which this epithelial debris is simply a part of a large cholesteatomatous mass, he would not only be washing for two or three hours, but he would be washing still. If you get out a little of the epithelial debris, it does not mean that the cavity is clean because the water finally runs clear; there may be a cholesteatomatous mass still there the size of a walnut. I do not agree with Dr. Fry on the wisdom of letting cases that show acute exacerbation run on without operation. Possibly the mass is already in direct communication with the dura, as I have found in several cases.

FIRST AID TO THE INSANE AND PSYCHOPATHIC WARDS.

Albert Warren Ferris, New York, says that midway between the home and the State hospital there should exist some competent agency for the care of the mentally disturbed until they can be permanently placed, and this authority should be the health officer, not the overseer of the poor. The place for the care of such patients should be

a properly arranged psychopathic ward with a physician and nurse in attendance, the place to be arranged with every convenience to render the patient happy and comfortable, since this is most important in the early stages to facilitate recovery. Instead the surroundings are often those of the jail; they are uncleanly, indecent, and disturbing just when they should be calming. Women should always be cared for by their own sex. A law has been passed in this State providing for such care, and we should now see that it is properly executed. Cases of mental disease that will be fatal will require care for but a short time. The earliest possible care should be ensured in such cases. The psychopathic ward should be attached to the general hospital, and should consist of private rooms, with every facility for cleanliness, sanitation, and care, and with pleasant surroundings. Here the alleged insane should be received and detained, and borderland cases should be placed for observation.—*Medical Record*, August 20, 1910.

MENINGITIS, CEREBROSPINAL.

Treatment.—Lumbar puncture as soon as distinct meningeal symptoms noted, draining away spinal fluid,—the more, the better. Next inject Flexner antimeningococcus serum in spinal canal; quantity of serum should equal but never exceed quantity of fluid drained away. If lumbar puncture yields dry tap, and meningeal symptoms continue, aspirate lateral ventricles, if in an infant, through anterior fontanelle, and if in an older child, by the Kocher method: Shave small patch of scalp and make one-inch linear incision 3.5 centimeters anterior to sulcus centralis. Expose bone and perforate it with Doyen perforator followed by a burr, leaving cup-shaped fossa and exposing dura. Gently insert hollow exploratory needle, with blunt point and side-openings, perpendicularly into second frontal convolution; at a depth of 4 to 5 centimeters ventricle is readily found, particularly if distended. If pus present, drain ventricle and then wash with normal saline until fluid returns clear. Inject 20 to 25 cubic centimeters of serum. Repeat this procedure daily until tapping of ventricles is negative. If symptoms of intracranial pressure, as vomiting or convulsions, appear immediately after injection, however, repeat procedure only once in 48 or 72 hours.

Case of an infant two months old reported, in which intraventricular method of treatment led to complete recovery. Infant was fed at the breast, bowel function insured by enemas or an occasional dose of castor oil, and diuresis promoted by giving water.—Fischer.

GASTRO-ENTERITIS OF BOTTLE-FED INFANTS.

Prophylaxis.—1. Certified milk or clean milk fresh from cow; if neither available, Pasteurization. 2. Fresh air. 3. Avoid overheated rooms. In hot weather child should be placed out-of-doors at night on properly screened porch. 4. Avoid overfeeding by giving boiled water to drink. 5. Light clothing and frequent cool bathing. 6. Destroy flies.

Treatment.—1. Withhold food for three days; then give barley-water. 2. Have child rest quietly in bed out-of-doors. 3. Wash stomach with boiled water at 100° to 110° F., with a little lime-water added. Before withdrawing tube introduce 2 drams of castor oil and give thorough colonic irrigation. In cases seen later stomach washing not indicated unless gastric irritability present. After stomach settled give cool boiled water freely by mouth. 4. Colonic irrigations every four hours on first day, and later twice daily. Nutrient enemas every four hours, following irrigations. Be cautious with cathartics. 5. Tub-bath, lasting 10 to 20 minutes, to control temperature and restlessness. 6. Drugs: Bismuth subnitrate, 1 to 2 drams daily, in a child of one year. Salol, 1 to 2 grains every 3 hours. Opium where pain and continued frequent stools. Brandy in boiled water where prostration; ½ ounce in 24 hours.—Hulse.

CHOLERA.

The epidemic of cholera that has prevailed throughout a large portion of Russia seems to be extending in other parts of Europe. A considerable number of cases have been reported from southern Italy, and King Emanuel and Queen Helena are taking a deep interest in the situation. The authorities in Austria and Germany are taking measures to prevent the spread of the disease in their countries, and measures to prevent the introduction of the disease into England have also been the subject of consideration by the British government. The United States government has also given instructions to consular officers at European ports as to the prevention of the embarkation of infected immigrants to this country. During the week ended August 6, 20,468 cases were reported throughout Russia with 8,679 deaths.

IS MERCURY A SPECIFIC IN PULMONARY TUBERCULOSIS?

Win. N. Beggs, Denver, Col., thinks that a specific remedy should be applicable with successful results in all clinical types of the disease treated, and in all stages of the disease. The dosage must

be adaptable to any degree of severity or rapidity of development of the disease, and no personal equation on the part of the physician should be necessary to effect a cure. He then proceeds to ask whether mercury in tuberculosis fulfills all these requirements. After reporting fourteen illustrative cases he formulates his conclusions. Mercury is in no sense a specific for pulmonary tuberculosis. It is valuable in certain cases, especially when there has been a specific taint. In most cases improvement is subjective, with very slow improvement in the physical signs. When syphilis is not present its value is due to the tonic effects of the drug, its beneficial effect on digestion, or the psychic effect of the treatment.—*Medical Record*, August 20, 1910.

The seventeenth session of the Union Medical Association of the Sixth Councilor District was held in the Y. M. C. A. building, Canton, Ohio, Tuesday, August 9, 1910, with the following program: "Vaccine Therapy in the Treatment of Gonococcus Infection," L. A. Buchman, Canton; "The Sero-Diagnosis of Syphilis," Geo. M. Logan, Akron; "Ectopic Pregnancies," N. W. Culbertson, Massillon; "Tubercular Peritonitis," H. J. Stoll, Wooster; "Accidental Surgery—Past, Present and Future," Carlos C. Booth, Youngstown; "Significance of Changes in the Reflexes," W. D. Deuschle, Columbus, professor of nervous diseases, Starling Medical college; "Seeing Ourselves as Others See Us," Ben R. McClellan, Xenia, ex-president State Medical Association. R. E. Skeel, Cleveland, president of State Medical Association, was a visitor.

Professor v. Strümpell, director of the third medical clinic at Vienna, has accepted a call as the successor of Curschmann. Among the factors influencing his decision to exchange Vienna for Leipsic were the uninspiring conditions of his Vienna clinic and the wish to return to his paternal city and to work in the place of his teacher, Ernst Wagner. Strümpell was called from Leipsic to Erlangen as professor, and for many years conducted the medical clinic there. From there he went about six years ago to Breslau and from there two years ago to Vienna. When von Leyden's chair became vacant three years ago many expected in vain that the Berlin faculty would place Strümpell's name on the list of candidates to succeed Leyden. I believe that today our faculty has reason to regret that it did not secure this distinguished clinician and highly-honored man as one of its members.—*Foreign Letter*.

The Ohio State Medical Journal

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AID THE LEGISLATIVE COMMITTEE.

As each legislative session opens the Legislative Committee finds itself confronted by ever increasing difficulties. The enemies of the medical profession for several years have been industriously working in season and out of season to discredit the science of medicine in general and our state organization in particular. Seizing upon the by-word of the day, they appeal to the ignorant and unthinking by cries of "Medical Trust"; unable to understand the motives of altruism which actuate our profession, they seek and assert ulterior reasons for every move we make. Such arguments have had their effect; each session it has proven more and more arduous to defend the medical practice act from the onslaughts of non-medical healers of all kinds and descriptions, who seek to exploit the fears and suffering of the sick for "what there is in it."

The integrity of the Medical Practice Act means the protection of the public from uneducated, improperly qualified would-be practitioners, and to us personally, our good name as physicians, collectively and individually. It is therefore our paramount

duty to do all in our power to uphold our standards and defend our honor.

It is not right nor fair to leave this matter to the Legislative Committee after the session opens; the Committee may be depended upon to do its utmost, but the battle may be won or lost in the next thirty days.

In the coming election there are no subjects comparable in importance to us as the position of the candidates on these questions relating to our profession. Party lines this year are loosely drawn, and party considerations should fall into insignificance at such a crisis. As published elsewhere in THE JOURNAL, the optometry bill is bound to come up again. We must oppose it on principle, as the opening wedge to destroy the Medical Practice Act. Its supporters are working openly against the re-election of the Governor, who had the courage to veto the bill on the broad grounds of its being prejudicial to the welfare of the community. They are forgetting party affiliations, and possibly have grounds for supporting the opposing candidate. This is a subject for the careful consideration of our 4000 members; how shall we cast our votes and use our influence in the matter of the election of the head of the ticket? At a

time when the integrity of the Medical Practice Act is attacked and when its assailants are seeking to make political capital in this campaign is it not mandatory for us to bestir ourselves? Many there are who decry our taking part in politics, but in our glorious country, politics, in the true sense of the word, is our birthright, and with our responsibilities to the public from our special knowledge and training in medical matters, refraining from taking sides at this time would be making a worse bargain than did poor old Esau in days of long ago.

The present Governor stands on his record; what do we know of his opponent? In a letter recently directed to a close friend of Mr. Harding's, the question was definitely put as to his position on the optometry bill should it again pass the legislature, as well as other non-medical healing measures, and in reply we receive "his assurance that he can be depended upon for doing the right thing." This is not very definite; it may mean anything or nothing. Can we afford to take chances?

The same may be said of the candidates for the legislature; some candidates for reelection are already on record as in favor of, or opposed to, legislation supported by the medical profession. Let us endeavor in each county and district to find out at once where the candidates stand, and *get out and work* for those who are intelligent enough and broadminded enough to recognize the economic humanitarianism of our motives; and who are not afraid to come out plainly and say so.

THE CARNEGIE FOUNDATION REPORT ON MEDICAL EDUCATION.*

Five years ago the trustees of the Carnegie Foundation began their investigation of the colleges and universities of North America with a view of determining how they might best expend the income from the

Carnegie endowment (\$15,000,000.00) entrusted to them for the advancement of teaching. Holding that all colleges and universities, whether supported by taxation or by private endowment, are public service corporations and that the public is entitled to know the facts concerning their development and administration, they decided to make public their findings concerning the medical schools as they had done in respect to the other institutions of learning in the United States and Canada. Besides pensions granted to teachers in the colleges and literary departments of universities, the beneficence has been extended already to a number of teachers in the medical and law schools of approved universities.

The report on medical education (Bulletin No. 4) was made by Dr. Abraham Flexner. The introduction, by Henry S. Pritchett, cites the fact that for the past twenty-five years there has been an enormous overproduction of uneducated and ill-trained medical practitioners, the physicians in the United States being four or five times as numerous in proportion to the population as in the older European countries; that this overproduction of ill-trained men is due in the main to the existence of a very large number of commercial schools; that, as the need for laboratories has become more keenly felt and the expenses of an efficient medical school have been greatly increased, the education provided therein has been correspondingly defective; and that a hospital under complete education control is as necessary to a medical school as is a laboratory of chemistry or pathology.

The first part of this report relates to the history of medical education in this country, including the evolution of medical colleges, the modern movement for the transfer of medical education to university surroundings, "the effort to procure stricter scrutiny of those entering the profession," the "present status of medical education," and a "forecast of possible progress in the future." The second part of the report gives

*This report can be secured by addressing the Carnegie Foundation, 76 Fifth Avenue, New York City, and enclosing 17 cents in stamps.

in detail a description of the existing schools, fully setting forth their equipment, methods and hospital connections, making clear the basis of medical education and course of study provided by each, including laboratory branches. The chapters relating to the proper basis of medical education, the actual basis of the same, the hospital as an indispensable adjunct, the financial aspect of medical education, the reconstruction that is now going on—the tendency being toward the medical school of university type, the medical sects and their facilities for education, and the relation of medical boards to the status of medical colleges, are classics on the respective subjects, while the whole report, bearing the stamp of being an accurate and fair statement of facts relating to our medical colleges, is evidently the result of a great amount of painstaking labor.

Such a report, coming from an outside source, laying bare as far as possible the facts relating to medical schools and medical education, must be a great benefit to the public, and especially to young men choosing a college in which to carry on their studies. The existence of many unnecessary and inadequate medical schools has an invalid defense in the argument that the poor medical school is justified in the interests of the poor boy. With our excellent schools and colleges it is fair to assume that any young man who has the ambition to enter a learned profession may acquire such a degree of secondary and collegiate education as will enable him to prosecute his studies in a first class medical college. "Low entrance requirements flourish, then, for the benefit of the poor school, not of the poor boy."

The medical school now demanded, and which is not without example in this country, "has well equipped laboratories conducted by modern teachers devoting themselves unreservedly to medical investigation and instruction, and with its own hospital, in which the training of physicians and the

healing of the sick harmoniously combine to the infinite advantage of both."

The clearness and directness of statement and evident fairness of the report in setting forth the merits and defects of the several colleges give it great weight. Each college may see itself as a competent and impartial educator sees it; and better still, the public may have the opportunity to compare and render judgment. The report supplements and reinforces, at an opportune time, the work of the Council on Medical Education of the American Medical Association. It will have a beneficial influence in awakening the weaker colleges to a realization of their shortcomings, and undoubtedly result in the correction of their defects, in the raising of education standards, the elimination of the weaker schools, the further consolidation of medical colleges, and their mergement as integral parts of literary colleges and universities.

This bulletin is to be followed by another one which will be of almost equal interest to American physicians, on Medical Education in Great Britain, Germany and France, which will enable those who are responsible for the reconstruction of medical education in America the opportunity of profiting by the experience of other countries.

The report will, we are confident, serve the high purpose of the Foundation in promoting the progress of medical education, and to this end we bespeak for it a careful study from cover to cover by every one who is in any way charged with the responsibility of managing medical colleges in this country.

A LOCAL PHYSICIANS' DIRECTORY.

For some years requests have come to the editor that in some way the specialists in our different cities should be indicated for the convenience of the members of the profession at large. It has been suggested from time to time that THE JOURNAL encourage the insertion of physicians cards,

as is done in a very large number of other state journals. This has not met the approbation of the Publication Committee, for, while appreciating the convenience of the idea it felt that it would not be sufficiently adopted to be of the greatest value. To be really useful, such a plan should embrace practically *all* of those engaged in special practice in a given community. After carefully considering the subject the Committee has inaugurated an entirely new design, and in the near future THE JOURNAL will contain each month a *Directory of Physicians* engaged in special work in the various communities of the state. This directory will be open to the members of the State Association engaged in limited practice, subject to the regulations of the Publication Committee. The names in each community will be arranged alphabetically, with the statement of the speciality followed, as for example, "Practice limited to General Surgery," followed by the address and office hours. The type and style used will be that of the ordinary medical directory, uniform in character, and each space allowed but four lines, and no individual allowed to have more than one space.

It is believed that this will be of considerable benefit in classifying the members in special practice, and also of great convenience to members who may wish to know authoritatively who are so engaged in the various localities of the state.

The insertions in this directory will cost each individual the nominal sum of five dollars per year.

It is hoped to make this an official directory of specialists, and every effort will be made to make it of the highest standard of precision. One of the main regulations of the Publication Committee is that every insertion shall be that of a practitioner generally recognized as devoting himself to the branch, or branches of medicine published after his name.

It is to be hoped that this plan will prove

itself to be a very beneficial one to the profession at large.

EDITORIAL NOTES

A WORD IN SEASON.

The medical profession as a body of men has stood for years in its own light, and when anything has been suggested that would be of benefit to it, as a rule it has either sat down, or backed up; in other words, it has not acted in unison to make itself felt as a body of scientific men. The result is that as a rule all laws that have been passed in the past few years have been beneficial to the quack, Christian scientist, osteopaths, and the so-called neurologists. For this we have no one to blame but ourselves, we have been sleeping, as it were, while our enemies have been creeping along under a shadow of protective law.

Man has gained dominion on this earth, not by birthright, but by conquests, so if we would improve our standing, we should leave nothing undone that will be of benefit to us, educationally, morally and financially.

The physician for his hard-earned knowledge, and hard work, is but poorly paid, and in many instances is not paid at all, while the fakir, and "know-it-all" are paid enormously for something they can never deliver. They are like many manufactured objects nowadays, mere imitations; they claim to be able to cure all the incurable diseases, without medicine or surgery, they are "near physicians", or as near as they can get with perhaps a short correspondence course, for which they receive diplomas to show the laity the vast amount of knowledge they have obtained, or often no real teaching at all, relying upon their brazen effrontery and the credulity of the masses.

If we should maintain our high standard, of which we should be proud, we should wake up and always be on the watch for something that will better us, not necessarily individually, but collectively. All bills that are presented to the legislature should be scrutinized, and we should be ready to assist their passage, if acceptable, or see that they are defeated if objectionable.

What may we do to defend our profession against the criticism and unkind things that have been said, and published in the past few years? Many things can be done—too many to be mentioned here, but every one of us can help in one way, and that is by affiliating with the medical associations, county and state, and by attending the meetings and conventions, so that we may be posted on the various topics affecting our profession, not only medical, but political as well. Now as I have mentioned politics, I will not finish this

communication without mentioning a few things that should be of vital importance to us all.

That the State of Ohio has had a man holding a high political office who has been against all that has been beneficial to the medical profession, goes without saying, and I refer to ex-Senator Foraker. Every bill that has come up supported by us has been fought by Foraker; and anything that has come that would be of help to the osteopath, Christian scientist, or the charlatan has been supported by him, and we have at times had to swallow the pill and say nothing. Now I want to say right here that the Republican party has given us another pill to swallow, and I want to ask are we fools enough to do it? I don't think so, and it is up to you and me to see that by casting our ballot in the right direction we put the Foraker element out of business once and for all; this can be done by the physicians and their friends in the state.

It is not a matter of party politics, it is of more importance than that, it concerns Democrats, as well as Republicans. It stands to reason that the medical profession of this state can expect no consideration in the legislature if the Foraker tribe is to be in power, and so it is up to you and me. Are we going to support followers of Foraker? Are we going to elect men in favor of non-medical-healing element?

Can we afford to sit down and do absolutely nothing? Can we as a body of scientific men go in the same old rut as we have been doing, when it is in our power to make ourselves felt in every corner of the state, if we have a mind to. These are questions we should take into consideration and then act with force that would put men in our legislature that would be equal in proportion to the other good things in the State of Ohio?

Only one suggestion more will I make in this paper, and that is, that every county medical society in this state would be able to swing any ballot that could be put in the field.

I believe that every physician in this state will readily look at this in the right light, and then make a special effort to get in line and do something this fall that will be of credit to the people in the good old State of Ohio.

F. D. SNYDER, M. D.,
Ashtabula.

Preliminary program of Section Proctology & Genito-Urinary Surgery.

First Day—1 p. m. Dermatology.

Chairman's Address, "The Late Advancements on Our Knowledge of Syphilis," by A. Ravogli, Cincinnati.

Annual Address, "Syphilis," by Henry R. Varney, Detroit, Michigan.

"Injection 606 Ehrlich-Hata in the Treatment of Syphilis," by M. L. Heidingsfeld, Cincinnati.

"Radiotherapy in Dermatology, with stereopticon demonstration of cases," by W. I. LeFevre, Cleveland.

"Epitheliomas," with report of cases, by E. D. Tucker, Toledo; H. W. Datchler, Toledo.

First Day—3 p. m. Proctology.

Annual Address, "The Cardinal Principles That Underlie Successful Proctologic Work," by Samuel T. Earle, Baltimore, Maryland.

"Stricture of the Rectum," by U. S. Grant Deaton, Toledo.

"The Relation of Proctology to Urology," by George B. Evans, Dayton.

"The Consideration of Pelvic Rectal Abscess," by Wells Teachnor, Columbus.

"Imperforate Anus," by J. Louis Ransohoff, Cincinnati.

Second Day—9 a. m. Genito-Urinary Surgery.

"Report of the Committee for the Prevention of Venereal Diseases," by the Secretary.

"Interstitial Nephritis," by Murry B. McGonigle, Toledo.

"The Role of Sexual Hyperaesthesia in the Production of Vesical Calculi," by O. E. Chenoweth, Lima.

"Sexual Neurasthenia," by T. M. Reade, Springfield.

"Complications of Gonorrhoea," with surgery of the male urethra, by E. O. Smith, Cincinnati.

Annual Addresses, "Some Points in Renal Surgery," by Louis E. Schmidt, Chicago, Ill.

"Surgical Aspects of Infections of the Uro-Genital Tract," by C. E. Barnett, Ft. Wayne, Ind.

"Perineal Versus Supra-pubic Prostatectomy," by Starling S. Wilcox, Columbus.

"Surgery of the Ureter," J. F. Baldwin, Columbus.

"Sarcoma of the Kidney," by Clarence Ordway, Toledo.

"Pollakiuria," by A. W. Nelson, Cincinnati.

"Tumors of the Bladder," demonstration of a new method of their removal, by Charles M. Harpster, Toledo.

ANOTHER OPTOMETRY BILL BEING FRAMED.

The promoters of the Dean bill to regulate the practice of optometry that passed the legislature last winter, but fell under the veto of Governor Harmon, are not discouraged, but will try it again next winter. The Columbus Optical Society lis-

tioned to an address by Edward E. Arrington, of Rochester, N. Y., at their rooms, 581 South High Street, Wednesday evening, his subject being the proposed bill.

A large number of opticians were present from Columbus and surrounding cities, including Chillicothe, Zanesville, Circleville, Newark and Washington C. H. Mr. Arrington said that he had no doubt the governor acted according to his convictions, but he had been misinformed as to the provisions and objects of the bill.

Short addresses were made also by Clark W. Sloan, president of the Ohio Opticians' Association; C. M. McDonnell, president of the American Association of Opticians, and G. L. Clark, president of the Columbus association. These officials are touring the state in the interest of the proposed legislation, and left Thursday for Dayton, from which place they will go to Cincinnati.

The above clipping from the Columbus Dispatch indicates work ahead for our association. We have no animus whatever against the opticians of our state, but we must oppose this proposed measure with all our power. Let no one think that this is a matter for the oculists alone; it would be but the forerunner of all sorts of other non-medical bills to utterly destroy the force of our medical practice act.

REVISED LIST OF OUTFIT STATIONS IN OHIO FOR THE DISTRIBUTION OF MAILING OUTFITS FOR THE BACTERIOLOGY DIAGNOSIS OF DIPHTHERIA, TYPHOID AND TUBERCULOSIS AND FOR THE DISTRIBUTION OF STATE LABEL ANTITOXIN.

In the list combined outfit and antitoxin stations are indicated by a star; antitoxin stations only, by a dagger; and outfit stations only, by a section mark.

Outfit stations are instructed to give physicians only enough outfits to cover cases in hand. If an outbreak occurs and many outfits are needed, the physician should communicate directly with the laboratory.

Outfit stations are supposed to keep an ample supply of each kind of outfit on hand to meet ordinary needs.

While owing to the cost of the outfits it is impossible to have stations in every town or village, it is intended to establish a few more stations in localities not now reasonably well covered, provided suitable stores can be found.

Any communication relative to the diagnostic service should be addressed to the Chief of Laboratories, Hygienic Laboratories, Ohio State Board of Health, Columbus, Ohio.

Adams County: *W. W. Alexander, Manchester; *Chas. L. Perry, Peebles; *Dr. James W. Bunn, West Union; *W. E. Sexton, Winchester.

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THE PRESENT STATUS OF MEDICAL EDUCATION IN OHIO.

The action of the Ohio State Medical Board in demanding a completed four-year high school course for entrance to a medical college was an important step in the right direction. While a considerable number of prospective students were unable to comply with the requirements, the colleges in Ohio have not suffered particularly for want of patronage. Quite a number of the applicants turned down went to schools in other states

where the requirements were not so exacting, and the remainder have either given up the study of medicine or are completing their preliminary education in literary colleges.

The profession in Ohio may not have known that students were permitted to enter medical colleges heretofore with as many as three conditions that could be removed during the following year. The Association of Medical Colleges in Ohio at its last meeting passed a resolution asking the board to eliminate conditions and demand a completed four-year high school course or its equivalent.

The looseness in entrance requirements in Ohio in the past has been the subject of much criticism in educational circles all over the country, and has been a real obstacle to a standardization of the high school course as an entrance requirement. There are no other states in the Union that have had *higher paper standards* than Ohio, but, owing to the conditions that could be carried into the medical course, the force of this standard has been weakened and our claim of superiority ridiculed. Now that a definite standard has been established, the next step is an amendment to the medical law giving the board the power to raise the standard still higher.

The evolution in medical education in the last two decades has been so pronounced that it might almost be termed "revolutionary." From practically no requirements twenty years ago in the United States, there has been evolved a recognized minimum standard for preliminary education and a definite medical course both in time and subjects.

It is now realized that this minimum standard is still too low and that the medical course should be extended to five years, or that a pre-medical course of one year should be added to the high school standard. Eight states have already passed laws to this effect. Ohio cannot afford to trail behind in educational matters, especially when the best interests of her citizens demand better things. The situation is now most favorable for such a step. The medical colleges in the state are ready for the advanced requirement, and will give all the support in their power toward amending the present law in the coming session of the legislature. The State Medical Society and the County Societies should take and interest in the proposed amendment. Two of the larger colleges of the state already require college work. The Starling-Ohio, the largest college in the state, is anxious and willing to support the movement.

With the co-operation of the medical societies and the leading medical colleges, there should be no difficulty in amending the law. The medical colleges should not be called upon to take the initiative without protection from the state. A higher requirement on the part of the colleges means that a large number of young men will go to colleges of other states for their medical education and return to Ohio to practice, as long as the present law is in force. This is not fair to the profession at large; not fair to the colleges of the state and their graduates, and a decided disadvantage to the public welfare, in that men are permitted to practice, over whose education the state has but very little control.

W. J. MEANS, M. D.

* Carries both outfits and antitoxin.

† Carries outfits only.

§ Carries antitoxin only.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.

LOUIS A. LEVISON, M. D., Toledo.

INGUINAL HERNIA: CERTAIN FACTS OF IMPORTANCE.

Scudder (Bost. Med. and Surg. Jour., Sept. 1, 1910, p. 343), makes an analysis of a series of 160 cases, mostly inguinal, and after a careful presentation of his method of making a Bassini operation, which he prefers, deduces certain facts concerned in the attaining of a cure. It is important in the operation to make "an ample cutaneous incision; absolute hemostasis; an anatomical dissection of the parts, to recognize clearly every structure; to have complete isolation of the neck or abdominal portion of the sac at the level of the peritoneum of the anterior of the abdominal wall; exact suture of the abdominal wall, including always one or two sutures placed over and above the sutured sac; and a minimum of trauma to the cord." He uses as a dressing dry sterile gauze fastened with collodion. He believes that "no especial dressing of the wound has any advantage over the dry sterile gauze," but that "the two factors, other things being equal, which favor healing of a hernial wound are absolute hemostasis and a minimum of operative trauma (by traction, etc.), to the skin edges and other tissues of the wound. Trauma to the skin may be avoided by an ample cutaneous incision."

Scudder's results in this series warrants him in saying that the operation gives at least 90% of cures. Among his cases where there was a recurrence, two were in patients having a chronic cough which had persisted for a year, one in a patient operated upon for strangulation, while in the remaining seven no explanation was apparent for the recurrence.

In considering the mortality when advising an operation for hernia there is, of course, a risk from the anesthetic, a risk from possible pneumonia, a risk from possible embolism, or a risk from sepsis. These risks must be taken and are to be disregarded under modern careful technic in dealing with a lesion so important as a hernia.

"The spermatic cord in the adult is best treated by transplanting it beneath the layer of the external oblique. In children it does not seem necessary to do this. If there exists a good-sized varicocele, it is wise to remove the spermatic vein not only for the cure of the varicocele, but to obtain greater security in the wound. When there is present an undescended testicle the removal of it with ligation of the cord upon the level of the

parietal peritoneum is indicated. It is unwise to operate upon infants under three years of age, and in the very aged operation is often contra-indicated. It is very important to emphasize the fact that an immediate operation should be done in case of a strangulated hernia. No taxis, not even the slightest, should be used. The danger of damage to the gut, and even rupture of the gut, and the danger of reducing the hernia en bloc is such that taxis should almost never be employed."

DOES TRAUMA PRODUCE DISEASES OF THE PELVIC ORGANS IN WOMEN?

Because of the frequent claim by women of injury to the pelvic organs due to accidents in railway wrecks, or while getting on and off railway conveyances, Harris (Surg. Gynec. and Obs., Aug., 1910, p. 124), has analyzed 1000 cases, of which 412 were accidents to women. Seventy-seven, or nearly 19%, claimed some injury to the pelvic organs as a direct result of the accident. About half of this number claimed to have received their injury in alighting from cars that started too suddenly, causing them to fall either on the back, side, or hands and knees. Eleven were injured by being thrown about in collisions, whereas six were run into and knocked down by cars. The rest were variously injured in similar mishaps. Of these women, five only were single, and but one a virgin.

Harris says "that it is plain that many of the conditions found, namely, old lacerations, rectoceles, cystoceles, prolapses, old displacements, intraligamentous cysts, pelvic tumor, etc., bore no causal relation to the accidents; it is equally plain that ruptured extrauterine pregnancy, acute vulvulus, twisted pedicle of the ovarian tumor, pelvic hematoma, the miscarriages, etc., were the direct result of the accidents." He draws the following general conclusions:

"Miscarriages during the first four months of pregnancy readily occur, often from comparatively slight injuries or even from fright, but after the fifth month, they very rarely occur. Such accidents very seldom, if ever, cause displacement or disease of the pelvic organs in women whose organs are normal and healthy at the time of the accident. Women with chronic pus tubes or other pelvic inflammations may have acute exacerbations excited by accidents which produce

general injuries. Women with old lacerations, displacements, prolapses, etc., may have their symptoms temporarily aggravated by general injuries and are particularly prone, either consciously or unconsciously, to attribute all their troubles to the accident which had little or nothing to do with causing the conditions present. Accidents producing general concussion of the body may produce a temporary irregularity in the menses, usually increasing them, but occasionally suspending them. Such derangement seldom lasts longer than three or four months."

ARTIFICIAL RESPIRATION IN NEW-BORN INFANTS.

Fothergill (*The Lancet*, July 23, 1910), considers the Shultze method of artificial respiration both dirty and risky, and says that he has used and taught the Buist method for many years and has found it effective, clean, and free from risk, and it can be continued for a long time without causing fatigue. The child is placed face downward on the palm of the hand with the head away from the operator. The upper and lower parts of the body and limbs are thus dependent over the edges of the hand. The child is then rolled over and at the same time transferred with a slight throw to the right hand in the dorsal position, the legs and arms being again dependent. It is then transferred to the left hand in the first position and the movement repeated twelve to sixteen times a minute.—*Via Med. Record.*

BANDAGE FOR CONE-SHAPED SURFACE.

Harding reports an excellent method of applying a bandage to any cone-shaped surface. Cut three strips of two-inch adhesive plaster the length of the completed bandage—two will do for an arm dressing. Fold them lengthwise with the sticky side out, and apply to the limb at equal intervals. Put on the first layer of roller as usual; then one strip of adhesive plaster applied in the same manner will suffice for each successive layer, making a bandage of exceptional strength and durability. It can be especially recommended for a knee dressing where it is desired to limit the motion. One reads much of starch bandages in works on surgery, but they are seldom found in the average office. A very satisfactory substitute can be made with the help of a bottle of thin glue or quickly drying cement. A few dabs of glue on every other layer of bandage as it is applied will convert it into a solid mass. This method can be used to apply further layers to the adhesive bandage described above.—J. A. M. A.

REFLEX STOMACH SYMPTOMS FROM ABNORMAL PELVIC AND ABDOMINAL CONDITIONS.

Every one knows that the stomach often seems at fault when the real trouble lies elsewhere. Gile (*Vermont Med. Monthly*, Aug., 1910, p. 191), believes that this is due to the fact that the secretions of the stomach are "stimulated and guided by the involuntary or sympathetic nervous system that like the sensitive aerial of a wireless responds to every irritant, and that thus the stomach acts as an organ of protest in matters with which it is not very intimately concerned."

There are four surgical conditions which are constantly being diagnosed as indigestion which should be kept in mind; appendicitis, acute or chronic, cholecystitis with or without gall stones, gastric ulcer, and gastric cancer. The two latter though they might be considered as the direct cause of indigestion often cause a grave failure of digestion before the lesion involves any considerable portion of the stomach wall and are thus treated as simple indigestion when they should be considered surgical. Both gall stones and chronic appendicitis give the picture of chronic indigestion.

"Every case of indigestion should be suspected of misrepresentation, of being a subterfuge, a decoy, to attract our attention to an unimportant point while the main attack against the system is going on elsewhere. Our only safety is diagnosis by exclusion until every extra-gastric cause is eliminated."

The association of the gastric symptom of hyperchlorhydria with conditions in the pelvis and abdomen requiring surgical attention is well illustrated by Carstens (*Med. Record*, Aug. 20, p. 318). The variety of these conditions is shown by an enumeration of the cases discussed. Pus tube; floating kidney; appendicitis; gallstones; chronic pelvic inflammation with retroverted uterus requiring hysterectomy; dysmenorrhea; and a case in which both gallstones and appendicitis were present. In all of these the symptom of hyperchlorhydria was present and at once cleared up following operation. Of the reason for this interrelation Carstens says:

"Adhesions in the peritoneum which interfere with peristalsis, or with movements in certain positions of the body pull and tug on certain organs, and thus irritate, and as all these are intimately associated with the solar plexus, it seems to me that irritation of the solar plexus, no matter how produced, will cause many cases of hyperchlorhydria. In other words, I believe that hyperchlorhydria, in the vast majority of cases, is

due to reflex action and irritation of the sympathetic nervous system.

"You will notice I say nothing about gastric or duodenal ulcers. I have had little experience in these, but believe that they also, in some cases, cause hyperchlorhydria by producing inflammatory and congested conditions of the mucous membrane directly, hence hypersecretions of all kinds."

In conclusion, he advocates that "cases of hyperchlorhydria that are not relieved by the ordinary treatment in the course of a reasonable time, should be subjected to an exploratory abdominal section, so that an exact diagnosis can be made. Sometimes the operation may fail to reveal the trouble, but in the vast majority of cases it will be found that there are adhesions of gall bladder, stomach, intestines, appendix, and pelvic organs that by reflex action produce that peculiar condition that we call hyperchlorhydria. Operations should not be indiscriminately made use of, but the stomach specialist should make more frequent use of abdominal surgery, which is now so free from danger, in obscure troubles of the digestive tract."

Briefly stated, hyperchlorhydria is a symptom, not a disease. Hyperchlorhydria is most frequently caused by reflex action. Hyperchlorhydria is probably due to irritation of the sympathetic nervous system. Persistent hyperchlorhydria should be cleared up by an exploratory abdominal section.

LOUIS A. LEVISON, M. D.

THE CLASSIFICATION OF APPENDICITIS.

MacCarty (Journal American Medical Association, Aug. 6, 1910): MacCarty's object in this logical classifications is to consider the subject in such a manner that the clinician and pathologist might better understand each other. His cases were studied in three groups, namely: (1) Appendices removed for appendicitis alone, (2) appendices removed during operation for other conditions in the abdomen, and (3) appendices removed from patients operated on for cholecystitis and cholelithiasis. In only 2000 of the cases were the histories examined and compared with the histories, the specimens were examined especially with the idea of studying the reaction to infection of an organ which varies so broadly anatomically and is exposed to such a great variety of pathogenic conditions and organisms. The specimens in his series grouped themselves under the following terms:

1. Appendicitis Catarrhalis Acuta.—A condition in which the mucosa is infiltrated with leucocytes

and is congested; there is a reaction in the lymph follicles and lymphatic tissue of the submucosa. The lymph spaces or vessels in all the other coats may also contain leucocytes.

2. Appendicitis Catarrhalis Chronica.—Arises as a result of repeated mild or severe catarrhal conditions and is marked by an increase of scar-tissue and distortion of the normal regularity of the coats and glands. Blood pigment is very frequently present in the mucosa.

3. Appendicitis Purulenta Necrotica.—An advanced stage of the acute catarrhal condition, plus the formation of intramural abscesses and necrosis.

4. Periappendicitis Acuta.—Merely describes an extension of the conditions just described to the peritoneum. The subserosa and serosa become congested, purulent or necrotic. The scar tissue of such a condition may be described as periappendicitis chronica.

5. Obliteration.—A condition of the lumen of the appendix which occurs as the result of destruction of the mucosa and formation of scar tissue in the submucosa and other coats. It occurs in any portion of the lumen.

MacCarthy draws the following conclusions:

1. Of all appendices removed at operation, 23.5% are partially or completely obliterated.

2. The shortest duration of the process of obliteration when it is continuous is less than ten years.

3. The process may be complete at ten years of age.

4. Obliteration does not occur as a physiologic involutionary process, but is dependent on a definite inflammatory reaction.

5. In a series of 2000 specimens 0.6%, or about 1 in every 175, appendices removed at operation are malignant.

6. In a series of 5000 specimens, 0.44%, or about 1 in every 225, appendices removed at operation are malignant.

7. In a series of 2000 specimens, 2.2%, or about 1 in every 40, partially or completely obliterated appendices are malignant.

8. In a series of 5000 specimens, 1.6%, or about 1 in every 53, partially or completely obliterated appendices are malignant.

9. Carcinoma of the appendix may occur as early as five years and as late as eighty years of age.

10. Of the carcinomata of the appendix found in this series, 77% were not capable of being diagnosed from the gross external appearance.

11. All appendices with partially or completely obliterated lumina should be removed during operation for other abdominal conditions when it

can be done without materially endangering the life of the patient.

LATENT LIFE OF ARTERIES.

(Journal Experimental Medicine, Vol. 12, No. 4). Carrel experimenting with the means of preserving animal tissues outside of the body comes to the following conclusions:

When a segment of artery, killed by heat, formalin or glycerin is transplanted, it undergoes a rapid degeneration. Its muscle fibers disappear while the tissue of the host reacts by building a new wall of connective tissue. When the transplanted vessel has been preserved in a condition of latent life, no degeneration of the wall occurs, or the wall undergoes only partial degeneration. The muscle fibers can keep their normal appearance, even for a long time after the operation. It is, therefore, demonstrated that arteries can be preserved outside of the body in a condition of unmanifested life.

The best method of preservation consists of placing the vessels, immersed in vaseline, in an ice box, the temperature of which is slightly above the freezing point.

From a surgical standpoint, the transplantation of preserved vessels can be used with some safety. When the arteries were kept in defibrinated blood or vaselin and in cold storage, the proportion of positive results was 75 and 80%, and this can probably be increased.

THE PLANTAR REFLEX IN INFANCY AND CHILDREN.

Fleischner (Archives of Pediatrics, August, 1910). Fleischner after discussing the normal plantar reflex in adults comes to the following conclusions:

1. The most valuable result can be obtained on single stimulation. Repeated stimuli disturb the child and render the result unsatisfactory.

2. Babies should always have warm feet if a satisfactory result is to be obtained.

3. In eliciting the Babinski phenomenon the outer side of the plantar surface should be stimulated, the lightest stimulation necessary for a result being employed.

4. Eighty-five per cent of children under one year of age who could not stand showed the infantile reflex, and only fifty per cent of children over this age who could not stand showed the same phenomenon.

5. Of the infants and children who could stand but could not walk, 75% showed the mixed infantile and adult phenomenon, and in 5% the result was variable. Of the children who could

walk, 55% showed the adult reflex, 40% the mixed reflex, and 5%, the infantile reflex.

6. The so-called Babinski phenomenon is practically of no value in infancy and childhood when the children cannot walk, and is then only of value if one is cognizant of the reflex present before the diseased process began.

THE SERUM TREATMENT OF GONORRHEAL ARTHRITIS.

Herbst (American Medicine, Aug., 1910). In a given case of arthritis, Herbst endeavors to determine whether the joint disease is caused by the invasion of the joint or its membranes by the germ or merely by its toxins. If the former, namely, that the joint or its membranes are invaded by the germ, antigonococcic serum has been worthless in his hands, just as it has in the treatment of all other infections with the gonococcus, such as urethritis, prostatitis, epididymitis, etc. The two conditions are difficult to distinguish clinically, except in the cases in which aspiration and staining of the secretion is done.

The serum is obtained from the uncastrated male sheep. Immunization requires ten weeks. The animal is given weekly injections into the peritoneal cavity; the first three injections are given with dead cultures; the last seven from live cultures. The quantity of these injections is gradually increased. The cultures are grown for twenty-three or four hours on ascitic agar. The serum is polyvalent, each culture being taken from six or eight strains. Monovalent strains have been used with less satisfactory results. At the present time, Herbst is using a serum from a horse, but without sufficient experience to speak of his results.

The patient should receive at least twenty-four to thirty c. c. and in some instances as much as eighty c. c. Most of the poor results are due to insufficient dosage. Unfortunately the serum has been placed on the market in packages containing three small vials, each vial having the capacity of two c. c. On this account many have thought that this was a sufficient dosage.

Herbst reports a case of a patient who contracted two and a half years ago. Three months later a multiple arthritis was contracted. This with a post gonorrheal prostatitis and a bilateral seminal vesiculitis was the indication for the use of the serum. He improved rapidly and after the fifth injection was entirely free from pain, although there still existed a slight disability from stiffness. The patient was in good condition some months afterward.

ACUTE PYELITIS IN CHILDREN.

Philhower (Journal Medical Society New Jersey, Sept., 1910). This disease deserves to be called to the attention of the profession on account of the frequent absence of local symptoms pointing to its location. It is characterized by rigors, high temperature, restlessness, marked anemia, and pus in the urine of very young children. Most of the cases so far reported have been in girl babies under two years of age. None of the earlier text-books speak of the condition. It is entirely probable that many cases formerly diagnosed as malaria, acute intestinal infections, auto-infections, tuberculous meningitis, were cases of acute pyelitis.

The colon bacillus is a constant factor in the diagnosis. The urethra in young girls is very short and a bladder infection can easily occur. The author believes that some other factor is concerned in the causation of the disease and inclines to the opinion that it is influenza. The influenza organism is a very itinerant organism and the infection may occur through the blood or the kidney may be excreting the organism when the infection occurs.

The urine must always be centrifuged in order to make a proper diagnosis even though a microscopical examination will not always show the disease. The treatment is as specific, definite, and prompt in its results as is antitoxin in diphtheria. Citrate of potash in large doses sufficient to neutralize the strongly acid urine will within a week cause the temperature to come down to normal and a marked improvement in all symptoms will immediately occur. Urotropin combined equally with benzoate of soda every three hours is even better than the citrate of potash, in the case in which the colon bacillus predominates. The restlessness and discomfort may be relieved by hot mustard foot baths. Hot water given high up in the bowel with a rectal irrigator is the most efficient diuretic. Large amounts should be given. The babies do not object to it and the kidneys never fail to send down a marked increase of urine, the temperature is always reduced and many hours of comfort given to these little patients. The urotropin or the saline treatment should not be continued too long, as they both prevent a return of the red cells to the blood. It is not necessary to continue these remedies until all the pus has disappeared from the urine. After the temperature remains normal for a week the specific treatment may be discontinued even though pus still remains in the urine. The anemia is very difficult to overcome, as it approaches the pernicious type. Out-of-door life, beef juice, scraped meat, green vegetables are all valuable.

BOOK REVIEWS

ANATOMY AND PHYSIOLOGY FOR NURSES. By LeRoy Lewis, M. D., Surgeon to and Lecturer on Anatomy and Physiology for Nurses at the Lewis Hospital, Bay City, Michigan. Second Revised Edition. 12 mo of 344 pages, with 161 illustrations. Philadelphia and London: W. B. Saunders Company. 1910. Cloth, \$1.75 net. Canadian Agents: The J. F. Hartz Co., Ltd.

The text is simple and comprehensive. The anatomy of the various organs and their physiologic functions that most concern the nurse are carefully considered, and can be intelligently applied in the care of the patient. This book can be used in the teaching of these subjects and is a valuable addition to the nurse's library.

DISEASES OF THE STOMACH AND INTESTINES. By Robert Coleman Kemp, M. D., Professor of Gastro Intestinal Diseases in the New York School of Clinical Medicine, etc.; with 280 illustrations, some in colors. W. B. Saunders Co., Philadelphia and London. 1910.

This work is an excellent one for the general practitioner. It covers a wide range of non-surgical diseases of the gastro-intestinal canal.

After giving a thorough description of the anatomy and physiology of the stomach and intestines he enters into a very practical discussion of the physical and mechanical methods of diagnosis and treatment. This is interesting as it shows a decided disposition nowadays towards these methods as adjuncts to medicine therapy. A very careful technic is given for both the chemical and functional tests, and he indicates forcibly those that will be of help to the general practitioner in distinction from those that can only be carried out by the ultra scientific.

The chapter on visceral ptosis is an excellent and timely one. The book meets so many conditions of utmost importance to the general practitioner that one should not be without it.

PULMONARY TUBERCULOSIS AND ITS COMPLICATIONS. By Sherman G. Bonney, M. D., Professor of Medicine, Denver and Gross College of Medicine, Denver. Octavo of 995 pages, with 243 original illustrations, including 31 in colors and 73 X-Ray photographs. Philadelphia and London: W. B. Saunders Company. 1910. Cloth, \$7.00 net; Half Morocco, \$8.50 net.

In the second edition of this excellent work the text of the first edition has been thoroughly revised and amplified. The author has carefully covered his subject and treats impartially all mooted questions.

Of especial note is the chapter on diagnosis by means of the X-ray. This is illustrated by 73 remarkably clear and well collected skiagraphs. The important contributions to the Washington

meeting of the International Tuberculosis Congress are also presented and discussed in these appropriate chapters.

This volume is especially adapted to the use of the general practitioner or for the use in a reference library. The subject is treated rather too fully for use as a text for students.

THE PRACTICAL MEDICINE SERIES. Comprising 10 volumes of the year's progress in Medicine and Surgery. Published by the Year Book Publishing Co., 40 Dearborn St., Chicago, Ill.

The first four volumes of "Practical Medical Series" (General Surgery, General Medicine, Gynecology and Eye, Ear, Nose and Throat) for 1910 are more than up to the standard. These volumes cover the entire field of medicine and surgery, and are almost invaluable for satisfactory reference for both the specialist and general practitioner.

REFRACTION AND MOTILITY OF THE EYE. By Ellice M. Alger, M. D. 380 pages. F. A. Davis Company. 1910.

This book is "meat." It is a condensed and systematic consideration of the fundamental principles of refraction and their application in practice, with a concise and lucid exposition of muscular disturbances.

There is a very careful elimination of non-essentials, and no exploitation of special fads. The style and method adopted are didactic and clinical, in no way discursive, presenting the subjects in practical form.

The book is evidently the outcome of thoughtful experience, and exhibits little radicalism, though the discarding of all astigmatic charts might be thought by some an exception to this general statement.

We would heartily recommend this presentation of these subjects to students desiring to be well grounded therein.

LIPPINCOTT'S NEW MEDICAL DICTIONARY. A Vocabulary of the Terms Used in Medicine and Allied Sciences with their pronunciation, etymology and signification, including much collateral information of a descriptive and encyclopedic character. By Henry W. Cattell, A. M. (Laf.), M. D. (U. of P.) Editor of International Clinics, Etc. Illustrated with figures in the text. J. B. Lippincott Co., Philadelphia and London.

This is an excellent work and one likely to become popular with the general profession. It is sufficiently broad in scope for all practical purposes, yet it is convenient in size and moderate in price. The definitions are brief but clear; the arrangement of the text is excellent; the etymol-

ogy is satisfactory and so are the rules for pronunciation in the main, though slightly lacking in clarity in some instances of vowel sounds.

The book is attractively mounted and will prove to be a useful and welcome addition to one's ready reference library.

NEPHROCOLOPTOSIS. By H. W. Longyear, M. D., Detroit, Mich. With 88 special illustrations and a colored frontispiece. Published by C. V. Mosby Company, St. Louis.

In this monogram of 125 pages the author gives a description of the nephrocolic ligament and its action in the causation of nephroptosis. The technic of the operation of nephrocolopecty (as devised by the author) in which the nephrocolic ligament is utilized to immobilize both kidney and bowel is elaborately described. The illustrations are good, and the text concise. End results in 54 operated cases are given.

DISLOCATIONS AND JOINT-FRACTURES. By Frederic Jay Cotton, A. M., M. D., First Assistant Surgeon, Boston City Hospital. Octavo of 654 pages, 1201 original illustrations. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

This beautiful volume will be recognized as the most useful and important work in its field. Not only are all the methods of examination of dislocations and joint injuries exhaustively considered, but the clinical phenomena, pathology and treatment are presented in an extremely practical manner. The text is profusely illustrated with original pictures, each one representing some point in diagnosis or treatment.

GYNECOLOGICAL DIAGNOSIS. By Walter L. Burrage, A. M., M. D., Fellow of the Obstetrical Society of Boston; Consulting Gynecologist to St. Elizabeth's Hospital; formerly visiting Gynecologist to St. Elizabeth's and the Carney Hospitals; Electro-Therapeutist and Surgeon to Out-Patients, Free Hospital for Women; Clinical Instructor in Gynecology, Harvard University and Instructor in Operative Gynecology in the Boston Polyclinic. With two hundred and seven text illustrations. New York and London: D. Appleton & Co., 1910.

This is a practical text-book, embodying simplicity of technic and concise statement of essentials. The various methods of the laboratory have wisely been left out, as the average physician has plenty of books from which he can get such information. The book has been written entirely from a clinical standpoint and the rarer diseases have been kept in the background. The general practitioner is more interested in those conditions with which he meets every day. A very valuable part of this work is the summarizing of the dif-

ferential diagnoses and the tables, which makes it possible for one to cover a large amount of ground in a short time; the index also is one of the most complete we have seen, and is a great aid for quick reference. Diseases of the bladder and rectum are discussed at length, and diseases of the female breast are fully considered. One of the very interesting and unusual chapters is that relating to gynecological affections of infancy and childhood. This part is different from the usual text-book. The whole work is carefully gotten up and the illustrations are better than the reviewer has seen for some time. This very valuable diagnostic aid should be upon the shelf of every practitioner and will be found to be of immense value in the every-day work of the busy doctor.

A TEXT-BOOK ON THE THERAPEUTIC ACTION OF LIGHT, INCLUDING THE RHO RAYS, SOLAR AND VIOLET RAYS, ELECTRIC ARC LIGHT, THE LIGHT CABINET—By G. E. Rodgers, M. D., Formerly Demonstrator of Anatomy in the University of New York City; with original illustrations; published by the author.

This is a work on a subject of which we heard much a few years ago, but not so favorably of late, probably due to the fact, as the author explains, from the little knowledge of the principles involved and the proper methods of applying them.

The tendency has been to use the cheaper forms of apparatus on the market, and then discard the measure entirely from disappointment at the result obtained.

The author has devoted a number of years to the collection of his data, and his experience would seem to show considerable value in the careful following of his technic.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College; one-time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, etc. Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia; Ophthalmologist to the Frederick Douglass Memorial Hospital; Instructor in Ophthalmology, Philadelphia Polyclinic Hospital and College for Graduated in Medicine. Volume II. June, 1910.

The volume is one of unusual interest. The article on "Hernia" by Coley is an exhaustive re-

view of the literature, and contains interesting case reports, together with good illustrations.

Edward Milton Foote reviews the "Surgery of the Abdomen." His discussion of the treatment of peritonitis is of special practical importance.

John G. Clark writes on "Gynecology," presenting a most comprehensive review of the literature and statistics of cancer of the uterus.

Stengle's review of "Diseases of the Blood, Diabetic, and Metabolic Diseases," "Diseases of the Thyroid Gland, Nutrition and the Lymphatic System," includes all of importance that has been written upon the subjects in recent years. The article on "Diabetes" deserves special mention.

Jackson's article on "Ophthalmology" fully reviews the literature of the year.

HOOKWORM DISEASE—Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis, and Treatment. By George Dock, A. M., M. D., Professor of the Theory and Practice of Medicine, Medical Department Tulane University of Louisiana, New Orleans, and Charles C. Bass, M. D., Instructor of Clinical Microscopy and Clinical Medicine, Medical Department Tulane University of Louisiana, New Orleans. 250 pages, royal octavo. Fifty illustrations, including one colored plate. Price, \$2.50. C. V. Mosby Company, St. Louis, Publishers.

This is a very valuable contribution on a subject of vital interest to our country in general and to the Southern states in particular. While written primarily for physicians in order that they might better treat the victims of uncinariasis, it is also full of information for hygienists, employers of labor and students of political economy. Without mentioning the subject, it is an eloquent argument for a national department of health where the conditions described could be thoroughly investigated and efficient measures taken to combat the very serious spread of this disease.

The subject is thoroughly and graphically considered from all sides; after two chapters on general remarks and geographical distribution, the authors depict in turn the zoological features of the parasite, the modes of infection, the pathology of the disease, symptomatology, diagnosis, prognosis, prophylaxis and treatment, all described in a most interesting and striking style.

The text is abundantly illustrated with excellent engravings.

Vesical is differentiated from urethral fistula by the fact that in the former leakage is continuous or especially before urination, and in the latter leakage occurs during urination.—S. S.

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKee, M. D., Collaborator.

The Brown County Medical Society celebrated its golden jubilee on September 7 at Ripley. The President, W. A. Francis, called the meeting to order at 11 a. m. A. G. Drury, of Cincinnati, gave the assembly address, a paper on "The Metchnikoff Theory of the Prolongation of Life." He stated that as early as the fifth Millennium B. C. medical writers gave rules for the preservation of life and health, and that the writings of Moses, 1500 to 1450 B. C. embrace hygienic rules of the highest sagacity. Cyrus the Great, 638 to 600 B. C. was able to conquer certain nations by ordering the drinking water of the troops to be boiled, preventing fevers which devastated the opposing armies.

Louis Cornaro, born in Venice in 1464 was raised in luxury until about forty years of age, when, suffering from resulting disease, he worked out a system of dietetics and living from which he never departed until he died at the age of 102 years. This system consisted in "The Temperate and Orderly Life." His food was bread, the yolk of an egg, a little meat and soup. Twelve ounces of solid and fourteen ounces of liquid daily. He wrote his first treatise on "The Temperate Life" at eighty-three and his fourth and last edition at ninety-five. With the developments along the line of prolongation of life in recent years, the name of Emil Metchnikoff is indissolubly linked. He was born in Russia in 1845. After much work along different lines of scientific investigation he, in 1888, went to the Pasteur Institute in Paris where he has remained ever since. From his studies made originally on water fleas, he discovered the function of the white corpuscles of the human blood and showed how they made war on the microbes of disease. He considers the colon the great source of intestinal putrefaction, consequently the great source of disease, and that the human system could well dispense with it. That aside from syphilis and alcoholism, intestinal putrefaction is responsible chiefly for such processes of degeneration as arterial and cerebral sclerosis, etc. The persistent use of buttermilk treated with the different forms of lactic acid ferment on the market—artificial buttermilk destroys this putrefaction. The Bulgarian bacillus is an extremely active producer of lactic acid.

Following this paper a dinner was served at the Parker House.

The following program was given after dinner:

Dr. Robert Carothers and B. F. Beebe, of Cincinnati, gave a talk on organization. A. W. Mitchell read a history of Brown County Medical Society. Robert Prine gave a biography of Dr. A. Beasley, the First Vice-President of the Society, and Dr. Geo. P. Tyler gave one of David Gould, the first Corresponding Secretary.

S. C. Gordon, the only surviving member of the original organization, gave some interesting reminiscient remarks.

The following is the program for September and October of the Cincinnati Academy of Medicine:

September 26.—Case reports. Please bring written reports.

October 3.—Section of specialties. "The Education of the Deaf Child," John A. Thompson. "Excision of the Tarsal Cartilage and Retro-Tarsal Fold for Advanced Trachoma. Presentation of Patient," J. H. Williams. "The X-Ray in Mastoiditis," Sidney Lange.

October 10.—Surgical section. "Surgery of Aneurism of the Thoracic Aorta and Its Branches," B. Merrill Ricketts.

October 17.—Medical section. "The Recognition of Incipient Phthisis," Albert Faller; discussion, Drs. Rockhill and Stix. "Modern Treatment of Contagious Diseases, A. J. Bell; discussion, Alfred Friedlander.

October 24.—Symposium on exophthalmic goitre. "Pathology," P. G. Woolley; "Symptoms," H. L. Woodward; "Medical Treatment," Allan Ramsey; "Surgical," W. D. Haines; "Ophthalmic," Victor Ray.

October 31.—Case reports.

The Cincinnati Academy of Medicine, at its first regular meeting after the summer vacation, September 26, 1910, devoted the time to the reports of cases. B. Merrill Ricketts reported some interesting cases of a medico-legal turn requiring the aid of the law in collecting his fee. Although the law got all the money, he felt that he had done the profession a kindness by enforcing payment of his bill, thereby educating the public to pay doctors' bills, a point in the education of the public which has been sadly neglected. Chas. T. Souther reported a rare case of obstetrics, delivery after repair of complete rupture of the perineum, which contained some interesting points. Other cases were reported by Drs. Kramer and Hiller. The matter of the increased fees on ac-

count of the State Society was taken up, and as per the constitution laid over for two weeks. "The Academy of Medicine, Its History, Constitution and By-Laws" was the title of a booklet presented to the Academy. Some pointed criticism was made because the historical part was taken from "Daniel Drake and His Followers," without the mention of the author of the work, Otto Juettner.

SECOND DISTRICT

HORACE BONNER, M. D., Collaborator.

The Second Councilor District meeting will be held in Springfield on Tuesday, October 25. An all-day meeting will be held, consisting of medical and surgical clinics and addresses by prominent men of the profession.

An earnest effort is being made by the local committee to make this a record breaker. The members of the district will doubtless remember the high class program of the Dayton meeting last year; the committee promises a program this year full of scientific interest that will eclipse all preceding. Let everybody take a day off and attend.

THIRD DISTRICT

H. B. GIBBON, M. D., Collaborator.

The physician being naturally of a scientific inclination and therefore interested in the various subjects of that nature, it was considered very fitting by the members of the Allen County Medical Society that they avail themselves of the opportunity to hear something outside of their own special sphere, so a special meeting was appointed for the evening of July 5 to hear a paper on "Radio-Activity," by our fellow townsman, Mr. John K. Brice, a very scholarly man and a deep student of things scientific.

To hear the essay was a rare treat and was enjoyed by a large number of physicians and invited guests. The ministers being most largely represented among the visitors, the legal fraternity next, with the business and educational worlds also represented. A vote of thanks was unanimously tendered Mr. Brice.

The first meeting of the Allen County Medical Society following the summer vacation, was held on the evening of September 6 with a goodly attendance of members and visitors, and a splendid interest manifest.

The final steps were taken to complete the organization of the Medical Library Association with the object in view of establishing a reference library of high class medical literature, at Lima Hospital.

The paper for the evening was presented by

A. H. Creps, on "Scarlet Fever." The doctor called special attention to prophylaxis and related his experience in several cases, with diphtheria antitoxins as an immunizing agent. In one family three children were treated with a single injection of antitoxin and escaped infection. In two other families the well children were treated after exposure, with the same result. A good discussion followed.

At the meeting of September 20 the paper was by G. A. Bachmeyer on "The Business Side of the Practice of Medicine." A plea was made for reform in the matter of costly proprietary preparations, and a more thorough study of drugs and their therapeutic action, so that the physician may be able to make the combinations needed to meet the indications in any given condition of disease.

Another feature was the warning against investing in schemes of which we know little or nothing. This oft repeated injunction will probably carry as much weight as heretofore—and no more. The fact that the physician is a physician and not a business man might as well be recognized by the physician and it is by the fellow who fleeces the confiding son of Esculapius of his easy money.

Another point is our failure to collect our bills. This is another proof that the physician is not a business man. Some of the reasons are neglect or failure to send statements at stated times; fear of alienating the affections of a friend or relative of our delinquent patron; an overweening ambition to have a larger visiting list; afraid the other fellow will get the business, etc. These strictures hardly apply to members of our society, of course, but are simply mentioned for the benefit of the profession.

EIGHTH DISTRICT

J. R. McDOWELL, M. D., Collaborator.

The eighteenth annual meeting of the Muskingum County Medical Society was held at the Clarendon Hotel, Zanesville, on Wednesday evening September 14. The following officers for the ensuing year were elected: President, J. T. Davis; Vice-President, W. C. Bateman; Secretary-Treasurer, J. R. McDowell; Censor, E. C. Logsdon; delegate to state society, H. T. Sutton; alternate, E. R. Brush.

After the election the society was tendered a banquet by the retiring President, R. B. Bainter. The following toasts were responded to:

"The Doctor on His Vacation," J. T. Davis; "The Pension Examiner," E. C. Logsdon; "The Doctor and His Automobile," W. A. Melick; "The Auxiliary Man," G. Wharburton; "The Doctor as

a Farmer," H. T. Sutton; "The Doctor in Politics," W. C. Bateman; "The Medical Society," J. R. McDowell.

Plans are being made to hold the Eighth District meeting at Zanesville the middle or last of November. The exact dates and the program have not been arranged, but will be announced in the next issue of the journal and let every doctor in the district make plans to attend this year and make it the largest as well as the best district meeting ever held.

TENTH DISTRICT

FRED FLETCHER, M. D., Collaborator.

Columbus Academy of Medicine, meeting September 5. Program was as follows: Presentation of cases and pathologic specimens. C. A. Christie related the history of a case of Vincent's angina recently under observation at the Columbus Barracks. Slides showing the spirochaetae Vencenti and other organisms were demonstrated.

Hugh Means presented a large sized vesical calculus removed from the bladder of a patient aged eighty-two upon whom a prostatectomy had been made. Dr. Means also reported a case of gun shot wound of the abdomen in which the left cornu of a pregnant uterus had been injured.

Eugene J. McCampbell reported two cases of myiasis intestinalis and presented the organisms.

S. J. Goodman showed three cases of foetus papyraceous.

Meeting September 19.—"Symposium on Hypertrophy of the Prostate." (1) Diagnosis, H. O. Bratton; (2) diagnostic value of the cystoscope, Hugh A. Baldwin; (3) general management, T. G. Youmans; (4) operative treatment (the choice of operation), S. S. Wilcox; (5) end results of operative and palliative treatment, E. M. Gilliam, E. A. Hamilton and W. J. Means.

General discussions: F. F. Lawrance, G. H. Schaweker and S. J. Goodman.

Meeting September 26—Symposium on Infra-Laryngeal Obstructions." (1) General classification of obstructions and measures for Relief, J. E. Brown; (2) intubation, C. S. Means; (3) tracheotomy, J. F. Baldwin; (4) bronchoscope, F. L. Stillman; (5) fluoroscope, C. F. Bowen; (6) struma (goiter) affecting the respiratory tract (b) laryngeal surgery.

General discussion (opened) by W. K. Rogers, A. C. Wolfe, Frank Winders and D. L. Moore.

The following resolution on the death of Hanley Chapman Rutter was read and adopted:

"The Academy of Medicine at its first meeting

after the demise of Hanley Chapman Rutter, one of its former members, desires to give public expression of its appreciation of his work as one of the leaders in this country in ameliorating the restrictive conditions surrounding the insane and epileptic wards of the state. To him, as much as any man, is due the credit of casting off the shackles which formerly bound these poor unfortunates, both physically and mentally.

"We deplore his untimely death, and register our belief that his desire to relieve those near and dear to him of the burdens and anguish of his continuous, hopeless suffering, prompted the act that took him to the Unknown beyond."

C. O. Probst,
F. F. Lawrence,
W. D. Deuschle,
Fred Fletcher.
Committee.

The regular monthly meeting of the Knox County Medical Society was held in the assembly room of the Young Men's Christian Association building on Friday September 9, 1910, at 9:30 a. m. The following is the program:

"Insanity in This State (a) As Affecting Responsibility for Crime; (b) As Affecting Civil Rights," E. V. Ackerman; "Medical Treatment of the Insane," H. W. Blair; "Any Old Thing," Wells Teachnor, Columbus.

W. I. Jones, D. D. S., read a paper by invitation on "Nitrous Oxide and Oxygen Anesthesia."

The speaker, after detailing his experiences with nitrous oxide alone, with air and with oxygen, declared his satisfaction with the last named and voiced his agreement with Hewit, of London, who, after 17,000 administrations, says, "There is no form of anesthesia at present known which is so devoid of danger as that which results from nitrous oxide when administered with a sufficient percentage of oxygen to prevent all asphyxial complications."

The speaker then drew attention to the fact that an American, Dr. Andrews of Chicago, had first used nitrous oxide in 1868, but it failed to arouse general interest until it was re-introduced by Paul Bert, the French physiologist, who carried on a long line of experiments to prove that nitrous oxide is a true anesthetic and that it does not produce anesthesia by asphyxiation, but that asphyxiation is only concomitant, and, that it is possible to produce a nonasphyxial form of anesthesia tranquil and immobile by the use of nitrous oxide mixed with oxygen, in which the

period of anesthesia is prolonged and the type improved. He then continued in part as follows:

The writer uses but these two methods in his practice and considers only these as practical or advisable.

Pure nitrous oxide is a sweetish non-irritating gas and is not unpleasant to inhale and if due attention is given to details in the administration, it may be inhaled without any discomfort whatsoever, and complete unconsciousness secured in from forty to fifty seconds, producing an average available anesthesia of about one minute, sufficient time for the performance of many small operations, such as the removal of adenoids and the extraction of teeth. But the administration of nitrous oxide in a state of purity for a longer period of time than fifty or sixty seconds throws the patient into an epileptiform or tetanic state and it is this factor which makes it absolutely irrespirable for a longer period of time than just stated and for this reason we will pass on to the consideration of nitrous oxide with oxygen in varying proportions, the last step in the development of nitrous oxide anesthesia.

The first operators used atmospheric air mixed with the nitrous oxide. Atmospheric air, as you know, is composed of nitrogen and oxygen (with one or two other unimportant substances) four parts of nitrogen to one of oxygen. Now let us suppose a case anesthetized with a mixture, composed of nitrous oxide and air.

Let 100% equal the anesthetic mixture of air and nitrous oxide.

60% equal nitrous oxide.

40% equal air (32 parts nitrogen.

(8 parts oxygen.

of which 32 parts is nitrogen and 8 parts oxygen. The 8% of oxygen would be a sufficient amount to prevent cyanosis but the 60% of nitrous oxide would not be sufficient to produce a profound and peaceful anesthesia free from muscular spasm. Or let us suppose the mixture was composed as follows:

80% equal nitrous oxide.

20% equal air. (16 nitrogen, 4 parts oxygen).

of which 16 parts is nitrogen and only 4 parts oxygen. In this case you would have too small an amount of oxygen to prevent cyanosis and possibly an insufficient amount of nitrous oxide to produce anesthesia, much, of course, depending upon the patient.

Now if in the first example, the oxygenating had been done with pure oxygen instead of atmospheric air, the inert and useless nitrogen would have been eliminated and its place in the

alveoli of the lungs would have been occupied by useful oxygen or nitrous oxide as the case might demand.

It can readily be seen that, although nitrogen is necessary to the welfare and happiness of mankind, yet in the presence of nitrous oxide and oxygen in the lungs it is a base interloper and only adds to the asphyxial character of the gas.

The process of anesthesia is not well understood, but the nitrous oxide enters the lungs and after being distributed through out the lung cells is absorbed by the blood, and finally reaches the nerve centers; all of them giving up to its seductive charm until finally the respiratory and cardiac centers are paralyzed. The respiratory center is always the first to succumb, and circulatory disturbances are always secondary to faulty respiration. In the administration of nitrous oxide and oxygen, in order to obtain the best results, the patient must be prepared with as much care as for any other general anesthetic.

Consequently, I advise the giving hypodermically of morphine sulphate $\frac{1}{8}$ to $\frac{1}{4}$ grain and 1-50 to 1-100 grain of atropin one-half hour before the operation, thereby securing a more tranquil anesthesia accompanied by complete relaxation even in rectal and other surgery of a like nature. I should say, however, to a novice in the science of anesthetics to proceed carefully when morphine has been used as a preliminary to nitrous oxide and oxygen, as I believe respiration is more liable to cease, and if this is so, of course it would be harder to re-establish respiration than it would otherwise be. The patient usually passes into a beautiful and profound anesthesia in about two minutes and he can be kept in this state to the end of the operation, whether that be three minutes or three hours, without any cyanosis or other asphyxial symptoms, providing due attention is given to detail and the two gases properly and skilfully mixed.

The speaker emphasized the need of careful technique and then concluded:

Some of the advantages of nitrous oxide anesthesia are:

First. Its low toxicity, compared with other anesthetic agents.

Second. It may be administered warm and there will be no post-operative bronchitis or pneumonia.

Third. Anesthesia is quickly induced and the gases are quickly eliminated, thereby insuring a speedier return of all the functions to the normal; for the shorter the induction period and the quicker the elimination, the better for all.

Fourth. Blood pressure is slightly raised during nitrous oxide anesthesia.

Fifth. According to Drs. Hamburger and Ewing, of Chicago, "Nitrous oxide causes no permanent effect of any significance, from the standpoint of blood changes."

Sixth. The last and one of the greatest advantages is the absence of nausea and vomiting.

NEWS NOTES

Edward Pfeiffer, of Columbus, known as the "Old German Doctor," was arrested upon a charge of misbranding of medicine made against him by State Dairy and Food Commissioner Dunlap. Pfeiffer makes and sells patent medicine which is declared to be a cure for a great variety of ills. A bottle of this medicine, upon analysis by the state chemists, was found to be largely a diluted alcoholic solution containing aloes. The state medical board has at different times charged Pfeiffer with practicing medicine irregularly.

"The King sends you greeting" was the message sent Florence Nightingale on the ninetieth anniversary of her birth May 12 last. It did not read "King George the Fifth" for Miss Nightingale was so feeble that they had not told her that her good friend Edward VII was dead. She lived but a little longer and August 13 closed her long and useful career. The writer having seen some of her work while a student in London wrote an appreciation of her on the approach of her ninetieth birthday and read it before the annual outing of Ohio physicians at the Miami Chautauqua. This paper was published and such was the popularity of the subject that it was copied in whole or in part so far as he knows in sixteen medical journals and the Cincinnati Enquirer. The medical journals ranged geographically from The Pacific Medical Journal, San Francisco, to the Medical Press and Circular London, England. It is with a feeling of satisfaction that the writer is aware that he has said all that he could in praise of Miss Nightingale before she left us. Better the laurel wreath upon her brow before the immortelles upon her tomb.

E. S. KcKee.

The New York Academy of Medicine has purchased property at 10 W. 44th street and 15 W. 43rd street, either for the purpose of remodeling the present building, or for the erection of a new building. The anniversary meeting of the academy will be held November 17, and will be devoted to animal experimentation in medicine. Addresses will be delivered by Dr. William W.

Keen, Philadelphia, on "The Influence of Antivivisection on the Character of its Advocates;" by Dr. William H. Welch, Baltimore, on "The Objections to Proposals of further Legislation to Regulate Animal Experimentation;" by Dr. W. B. Cannon, Harvard Medical School, on "The Character of Antivivisection Literature."

At the thirty-eighth annual meeting of the American Public Health Association, held in Milwaukee September 6 to 9 the following officers were elected: President, Dr. Robert M. Simpson, Winnipeg, Man.; vice-presidents, Drs. Fernando Lopez, Mexico City, Mexico; John Anderson, Washington, D. C., and Gerhard A. Bading, Milwaukee; secretary, Dr. William C. Woodward, Washington, D. C., and treasurer, T. H. Wine, New Haven, Conn.

Following the adoption of a resolution of the new Cincinnati Hospital Commission, declaring its intention of appropriating the property between Eden avenue and Vine street, it was announced, September 1, that the commission, after acquiring the property, would donate a hilltop site for the new buildings for the Ohio-Miami Medical School.

Dudley P. Allen, Cleveland, for many years visiting surgeon at Lakeside Hospital, has resigned from the staff, and from his chair in the Medical Department of Western Reserve University, has given his library to the Cleveland Medical Library, disposed of his instruments and appliances, retired from practice, and with Mrs. Allen, sailed for Europe August 9.

Charles A. L. Reed, Cincinnati, sailed for Europe August 18 to attend the International Congress on Gynecology and Obstetrics.

Ehrlich's "606" (dioxy-diamidoarsenobenzol) was so named because it was the result of his six hundred and sixth experiment.

James Donnelly, Toledo, is reported to be critically ill with typhoid fever at St. Vincent's Hospital.

The New York Medical Journal has the following to say on the sale of "Ehrlich's 606." The preparation will be on sale in United States on November 1 through Victor Koechl and Company, of New York. We again direct our readers' attention to the inventor's warning to follow im-

plicitly his instructions as to dose and use. The remedy should not be used in every case of syphilis. In the instructions which accompany every tube of "606" Ehrlich states that it should only be used in syphilitics who have no organic lesions and who show no mercurial effects.

The sixty-sixth annual session of the Eclectic Medical College, Cincinnati, Ohio, opened on September 19 in their new building on West Sixth street, adjoining the Seton Hospital, formerly the Presbyterian. With six well equipped laboratories and many other improvements, a successful year is anticipated.

There are only two medical colleges in Cincinnati now, and only six in Ohio, quite a contrast with the time when there were twenty.

The Eclectic College requires the Ohio medical students certificate issued by the medical board, on the basis of graduation from a first grade high school, but does not demand a pre-medical literary college year.

Drs. A. B. and Wade Thrasher, of Cincinnati, after an association of seventeen years have mutually agreed to separate their practices. Dr. Wade Thrasher has furnished up a suite of offices in the Providential Bank building.

PROGRAM FOR EYE, EAR, NOSE AND THROAT.

It is time to begin to think about the program for the Cleveland meeting. Dr. Wade Thrasher, the secretary, would be pleased to hear from those who desire to contribute to the program for the next meeting. It will facilitate the formulation of the program if those desiring to participate will send in their names at an early date. Please communicate with Dr. Wade Thrasher at the Providential Bank building at Seventh and Vine.

The American Academy of Ophthalmology, Otology and Laryngology met in its regular annual session at Cincinnati, September 19, 20, 21, under the presidency of Dr. Wendell Reber. Among the interesting subjects discussed was the Smith cataract operation, by Drs. Derrick T. Vail, of Cincinnati, and D. W. Green, of Dayton, Ohio. There were many other subjects discussed more or less in extenso and entirely too numerous to mention here. The local committee having in charge the arrangements for the entertainment

of the Society were successful in their efforts, and the annual dinner and the smoker were very enjoyable affairs. The Owen bill was highly complimented. A resolution that in the future all graduates in medicine should be competent to do refraction work was passed. A year book was determined upon, which will contain the annual transactions. Following are the officers elected: President, J. J. Kyle, Indianapolis; First Vice-President, F. Park Lewis, Buffalo; Second Vice-President, Samuel Iglauer, Cincinnati; Third Vice-President, B. K. Shurley, Detroit; Secretary, George F. Suker, Chicago; Treasurer, S. H. Lange, Cleveland; H. G. Sherman, Cleveland; and Wm. Reber, Philadelphia, and J. C. Beck, Chicago, members of Council.

The annual election of S. C. Swartsel officers of the McDowell Medical Society, of Cincinnati, resulted as follows: President, S. C. Swartsel; Vice-President Wm. Schollenbarger; Secretary, Franz Mackette; Treasurer, Wm. Kilgour.

The Cincinnati Obstetrical Society met for its September meeting at the office of Dr. Chas. T. Souther. Case reports was the order of the evening.

DEATHS

D. W. Copeland, Starling Medical College, 1893; died at his home in Somerton August 23 from autointoxication, aged 40.

D. G. Palmer, Western Reserve University, 1879; died at his home in Geneva August 27, aged 68.

D. D. Bramble, Medical College of Ohio, 1862; died at his home in Avondale September 2 from nephritis, aged 70.

A. H. Iddings, Bellevue Medical College, 1866; died at St. Anthonys Hospital August 20 from chronic interstitial nephritis, aged 70.

E. L. Moodie, Baltimore Medical College, 1902; died in Detroit July 8 from sepsis, following an operation for hemorrhoids, aged 36.

H. McFadden, Medical College of Ohio, 1862; died at his home in Magnetic Springs August 31, aged 70.

M. D. Ditzler, Cincinnati College of Medicine and Surgery, 1876; died at his home in Lewistown August 31, aged 56.

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ORIGINAL ARTICLES

SOME SYMPTOMS WHICH WOULD LEAD TO THE EARLY DIAGNOSIS OF CANCER OF THE RECTUM.

LOUIS J. HIRSCHMAN, M. D.,
Detroit.

[Read before the Ohio State Medical Association.]

In the first place, Mr. Chairman, and Members of the Section on Dermatology, Proctology and Genito-Urinary Surgery, allow me to express to you my deep appreciation of the honor you have conferred on me by your invitation to deliver the annual address on proctology.

Being but an humble worker in the special field of proctologic medicine and surgery, I take it more as a recognition on your part of the growing importance of our specialty, rather than any honor of a personal nature.

Believing that it is the duty of the specialist at all times to assist and instruct the general practitioner in matters peculiar to his specialty, whenever occasions arise, I have chosen today to say a few words on what is probably the most important subject in the whole realm of proctology, malignant disease of the rectum and sigmoid, and to pay particular attention to the symptoms early in its development.

The subject of cancer is, and always will be, one of absorbing interest to every member of the medical profession. While we do not know as yet, the definite tissue change, micro-organism, or excitement, which is responsible for its causation, we have a very distinct, though unfortunate realization of its existence, its wide distribution, its malignancy, its morbidity, and its mortality. One can scarcely pick up a current medical journal without finding one or more articles written upon the pathology, mortality statistics, and more often surgical technique for the removal or extirpation of malignant growths from various parts of the body. There has, however, been an unfortunate lack of prominence given to the symptoms of

malignant disease, which are made manifest early in its progress.

Every surgeon knows that if he can get cases of cancer in certain parts of the body early enough, he can extirpate them with hope of a permanent cure in a gradually increasing percentage of cases. It is the medical man who first sees the patient suffering from malignant disease of any part of the organism. Therefore, if the general practitioner of medicine had a better and clearer understanding of the symptoms which should put him on the lookout for commencing malignant disease, he would examine his patients earlier, make earlier diagnoses of beginning malignant disease, have his patients operated upon earlier, and still further increase the percentage of recoveries from cancer.

Cancer of the rectum offers a peculiarly favorable field for cure by early extirpation, and on account of its accessibility to examination should be diagnosed in its earliest stages by any practitioner of medicine. It is strangely but unfortunately true, however, that today the majority of patients afflicted with cancer of the rectum are brought to the surgeon too late, as a rule, for successful operative interference. This presupposes two conditions:

First. That the symptoms of cancer of the rectum in the beginning and in the early stages are so insidious that the patient does not consult his physician about them.

Second. That the physician either does not deem these symptoms of sufficient importance to warrant a rectal examination, or his earlier training in proctology has been so incomplete or neglected that he does not know how to make a proper proctoscopic examination of his patient.

The frequency with which cancer of the rectum occurs is not fully appreciated by the great mass of practitioners of medicine. Fifty per cent of all cancers occur in the digestive tract, and sixteen per cent of all cancers of the digestive tract originate in the rectum. Boas, in a series of five hundred cases of cancer of the digestive tract, discovered primary rectal cancers. This means

that between eight and nine per cent of all malignant growths are rectal cancers. In the last five years there have come under the author's observation, thirty cases of cancer of the rectum (eighteen of which were observed in the last eighteen months), several of which proved on examination, to have progressed so far as to be inoperable. On going over the previous histories of these cases, a number of startling facts were brought to light, from which most of the conclusions brought out in this paper have been drawn. While in the main these agree with those of other writers, several points have impressed the writer on account of their variance with some of the authorities.

There are several points in connection with cancer of the rectum which are of importance in its early diagnosis and treatment, and a knowledge of which will be of material assistance to the practitioner of medicine who will bear it in mind in his routine examination of cases in his daily practice. Cancer of the rectum has been found in patients as young as fifteen years of age, as well as in patients in the evening of life. The period between the ages of thirty-five and seventy presents the greatest proportion of cases. In the author's series of cases the youngest case in the female was twenty-eight years of age, and in the male thirty years of age. His oldest case in the female was sixty-eight years of age, and the oldest male seventy-nine. Seventeen out of his thirty cases were under fifty years of age; ten females and seven males. The average age in men being fifty-five, and in women forty-four. While most authorities state that cancer of the rectum is more often found in the male than in the female, some giving as high as two males to one female, the author's series shows a reversed ratio, seventeen of his cases being female and but thirteen male. The greater chance for trauma in the female pelvis being, I believe, responsible for this, as is also the fact that constipation is more common in women than men. Twelve out of the author's thirty cases were not over forty-two years of age, and eight were sixty or above. It will be seen from the above figures that it is just as important to bear in mind the possibility of the existence of malignant disease in a patient below forty as above.

What are the earliest recognizable symptoms of beginning cancer of the rectum? In twenty-three out of the author's thirty cases, constipation was the principal symptom of which the patient complained before his attention was directed to his rectum. In five of the cases the gradual onset of diarrhea was the first deviation from the normal,

and in two of the cases diarrhea and constipation alternated.

Twenty-three of the patients gave a definite history of digestive disturbance, several of them having been treated for supposed stomach disorders for varying periods before seen by the writer. The description of the digestive disturbance varied from occasional attacks of nausea and vomiting and repeated attacks of acute indigestion in some, to a persistently increasing condition of gaseous abdominal distension accompanied by frequent eructations by mouth and the passage of flatus by rectum, accompanied later in the disease by occasional attacks of vomiting. In a few of the cases diarrhea was an early symptom, and in many of the cases who gave constipation as an early symptom, a so-called diarrhea, which in reality was the passage of mucus stained with fecal matter was later a common symptom. Fifteen of the author's cases stated that they had observed the appearance of blood with their stools soon after the digestive disturbances had become manifest, and with but six exceptions they had either diagnosed their own case as bleeding piles or the condition had been diagnosed(?) without examination by the attending physician as such.

Pain in the earlier stages, and in many cases quite far advanced, is often not present at all, and when it is present consists of a diffused, aching sensation referred to the lumbar region, the region of the sacrum, and sometimes shooting down the limbs, simulating sciatica. It is only in cases of primary cancer of the anal canal that pain is at all an early symptom. It may be said here that the nearer to the anus the cancer is located, the more pronounced are the symptoms, and the higher in the bowel the location of the cancer the less manifest are the symptoms. This also holds true in regard to the question of hemorrhage. Those conditions whether malignant or not, located nearest the anal outlet, are manifested by the loss of bright red blood, and the further from the anus the location of the growth, the darker in color the blood. The coffee ground or tarry stools indicate a growth higher up in the intestinal canal.

The frequency with which constipation is met, as a precursory symptom of cancer of the rectum would suggest:

First. That the long continued traumatism to the mucous membrane lining the rectum, caused by the passage of hard, harsh stools from which most of the fluid elements have been absorbed, would lower the local resistance of the rectum and predispose to malignant disease.

Second. The atony of the circular and longitudinal fibres of the rectum, caused by over-dis-

tension from accumulated feces in the constipated individual, would still further lower resistance.

Third. The patient suffering from chronic constipation always suffers from a long continued state of auto-intoxication due to reabsorption of waste products retained in the rectum and sigmoid unduly long, thus reducing the general resisting power of the patient.

Fourth. Constipation, by restricting elimination from the intestinal tract, interferes with the metabolism of the individual by its interference with all the digestive processes and consequently with nutrition. All of the foregoing, it will be seen, has an important bearing on the subject and must be given grave consideration.

It is a well known fact that benign growths, particularly those situated where they are subject to long continued traumatism or irritation, may undergo malignant degeneration. That this fact is true in regard to the rectum has been proved repeatedly by microscopic findings, of which the following is a fair sample:

Case 13, Dr. L—, aged fifty. The patient suffered for a long time from a fissure and polypus which refused to heal. On account of this chronicity the author, instead of operating for fissure at once, removed a small portion of the growth for microscopic examination. The report of the Detroit Clinical Laboratory was as follows:

"In one portion of the material submitted is a material thickening of the squamous epithelial layer, directly adjoining the glandular epithelium of the rectum. This thickening is very irregular, sending processes into the deeper tissue and surrounded by pronounced reaction of the connective tissue and lymphocytes. This tendency to ramify, together with the lymphatic reaction, is suspicious of a possible early malignant transformation. On the other hand, the borders of the epithelial processes are sharply delineated, there is no formation of "Whirls," and very few mitoses, and in the absence of all these changes, malignancy cannot be diagnosed.

"It is a case in which the histological examination cannot give an absolute diagnosis, but it may at least be said that the prognosis must be guarded and the lesion closely watched."

In this connection I might mention the importance in these border line cases, of obtaining several sections of tissue for microscopic examination. A recent case under my observation emphasizes the importance of this. The patient having given a suspicious history and an ulcer with indurated edges being discovered on proctoscopic examination. Five sections were taken from different parts on the growth. The first two sections were negative on microscopic examination.

The last three showed positive malignant changes. Had we rested content on the findings of a single section, we certainly would have been led astray.

The first symptoms, then, which are present in the vast majority of patients found to be suffering from rectal cancer are *constipation, either alone or alternating with diarrhea in a few cases, accompanied by digestive disturbances usually of a gaseous nature. A little later on the appearance of some blood with the stool, or the passage of increased amounts of mucus, either clear, stained with feces or blood streaked, are symptoms which should imperatively demand in every case a proctoscopic and sigmoidoscope examination of the patient.* To simply make a digital examination of such a case, or include the slipshod, haphazard, so-called examination with a bivalve speculum, and call this a complete rectal examination, is nothing short of criminal neglect on the part of the practitioner. Knowing, as we do, not that the majority of cases suffering from digestive disturbances or constipation become cancer patients, but that *the majority of cancer patients present these symptoms early enough in the disease to allow of some hope of cure if properly recognized*, it is our duty to the patient, his family, the community and ourselves to make a complete proctoscopic and sigmoidoscopic examination and to know, through the evidence of our own eyes, whether or not he has a commencing cancer of the rectum or sigmoid. Any one can make a diagnosis of cancer of the rectum, after the patient has suffered so long and the cancer has progressed so far as to nearly occlude the lumen of the gut, involve other organs and presenting such symptoms as the following:

Almost complete occlusion; hemorrhages with every bowel movement; frequent and copious discharges of muco-purulent material with its almost pathognomic stench; lack of continence; loss of weight and cachectic appearance, with secondary involvement of the inguinal glands, the pre-sacral and mesenteric glands and the liver. But when that diagnosis is made, the patient, in eight out of ten, is beyond all operative help, even that of temporary relief sometimes accorded by colostomy.

Out of the author's series of thirty cases, nine presented themselves with symptoms similar to the above, and were absolutely hopeless.

The younger the patient, the more rapid is the growth of cancer of the rectum. Bearing this fact in mind, the author believes it is advisable to insist that every patient, no matter how young, suffering from digestive disturbances, accompanied by constipation or not, should be subjected to a proctoscopic examination in order to exclude

the possibility of cancer. It is extremely important in patients who present the symptoms mentioned above even though local rectal disease of a benign character, such as hemorrhoids, fissure, fistula, polypus, ulceration or prolapse be discovered on proctologic examination, to not be satisfied with these findings, but to invariably examine the rectum higher up for the presence of a far more serious condition with which the existence of the minor conditions are merely coincident. Tuttle reports, in his series of one hundred cases, thirteen patients who had been operated upon for one of the minor conditions mentioned above, but a short time before they fell into his hands for the extirpation of a rectal cancer situated higher up, whose existence had not been diagnosed at the time of the previous operation. The fact that a patient is over sixty and the existence of a commencing carcinoma of the rectum discovered, should not discourage immediate operation, as statistics show that the mortality rate in the removal of cancer of the rectum, particularly by the perineal route, in patients between sixty and eighty is much lower than in younger patients.

As I have said before, the one greatest point in the successful treatment in cancer of the rectum is its early recognition and immediate extirpation. The inoculation of the patient after removal of the growth by a vaccine or serum prepared from the patient's own blood or from the growth itself, it is hoped by some experimenters will prove the greatest advance yet made in the successful cure of cancer.

I will conclude by offering a few "don'ts", which, if borne in mind by every practitioner of medicine, will assist materially in causing more early extirpations performed.

1. Don't take it for granted that stomach symptoms are always due to pathology situated in the stomach. They are more often due to some interference with intestinal activity.

2. Don't ever take the patient's history of "indigestion" or "an attack of piles" for granted. Insist on a rectal examination in every instance.

3. Don't fail to make a proctoscopic examination of every case of so-called constipation.

4. Don't take it for granted that the passage of bloody or slimy stools means dysentery.

5. Don't take it for granted that chronic diarrhea is always due to stomach or intestinal indigestion.

6. Don't take it for granted that all you need to do for a case of so-called chronic diarrhea is to prescribe a limited diet and intestinal antiseptics and astringents. These cases demand proctoscopic examination for diagnosis.

7. Don't take it for granted that the patient's history of rectal hemorrhage means the presence of hemorrhoids.

8. Don't take it for granted that a cancer patient must be over forty years of age. The so-called "cancer age" means any time from puberty to senility.

9. Don't be led astray by the absence of the cachectic appearance. Many patients may be suffering from rectal cancer so far advanced as to be inoperable and yet appear to be in robust health.

10. Don't fail to remember that the majority of patients suffering from rectal cancer give a history of previous constipation.

11. Don't fail to remember that ninety per cent of all patients suffering from rectal cancer give a previous history of intestinal indigestion, intestinal fermentation and so-called "dyspepsia."

12. Don't forget that recurring attacks of diarrhea that are worse in the morning are very suggestive of commencing cancer of the rectum.

13. Don't forget that rectal cancers which comprise sixteen per cent of all malignant growths of the digestive tract, and between eight and nine per cent of all cancers, are diagnosed less often in their early stages than cancers in the other parts of the body. This is on account of their insidious onset and the neglect on the part of the profession to make rectal examinations.

14. Don't fail to remember in examining for cancer of the rectum that a digital examination does not mean an examination of the rectum by any means. Ocular inspection by means of both proctoscope and sigmoidoscope are imperative for a correct diagnosis.

15. Don't fail to remove small sections of tissue from every suspicious ulceration in the rectum or sigmoid of a patient giving a history of digestive disturbances, diarrhea or constipation. Don't rest satisfied with a single microscopic examination if it proves negative.

16. Don't forget that in inoperable cancer, a colostomy retards the growth and adds at least from one to three years to the patient's life.

17. Don't forget that in inoperable cancer or in a cancer patient suffering from cardiac or pulmonary complications that colostomy may be done satisfactorily under local anesthesia.

18. Don't forget that the first indication for treatment in every case of cancer of the rectum is immediate extirpation, a discussion of the technique of which does not come within the scope of this paper.

The author would reiterate in conclusion that if every physician makes it a routine practice to examine every case presenting symptoms of con-

tinued digestive disturbances of any kind, constipation, diarrhea, or the presence of blood or increased amounts of mucus in the stool, he will occasionally discover the presence of cancer of the rectum or sigmoid early enough so that its prompt removal will result in a permanent cure of his patient in forty-five per cent of all cases, and a prolongation of life and comfort varying in time from three years up in at least twenty per cent of cases, which would, if not diagnosed early and removed, result in a mortality of one hundred per cent.

INTRA VESICAL OPERATIONS WITH REPORT OF CASES.*

CHARLES M. HARPSTER,
Toledo.

[Read before the Ohio State Medical Association.]

I suppose you are all familiar with the incident leading to the discovery and perfection of the cystoscope. The late Prof. Max Nitze, one day while cleaning an objective, after having used his microscope, discovered accidentally that he could see a reflected image around the corner of his objective. He immediately applied the principle of a lens system to an endoscope, which was introduced into the bladder and called a cystoscope.¹

Advancements in electricity and genito-urinary surgery have given us today instruments of great merit and value in the treatment of bladder pathology. The urologist appreciates the great value of these instruments and appliances to the utmost.

Before entering upon the merits of intra vesical operations, I shall endeavor to point out briefly some of the most important uses of the cystoscope. We are able to see the conditions of affairs rather than to diagnose by symptoms.

First., tumors, as papillomata, sarcomata, and carcinomata.

Second, foreign bodies as calculi, needles, pebbles, portions of ligatures, catheter tips, and chewing gum, as in my cases, and pieces of catheters, hairpins, pipestems, sticks, marbles, etc., etc.

Third, ulcerations as simple or tuberculous. The tuberculous ulcer is preceded by military tuberculosis; coalescence and caseation is followed by a dirty, yellow indolent ulcer.

Fourth, cystitis, its extent and mode of infection. For diagnosing prostatic diseases and pericystic enlargements.

Fifth, condition of ureteral orifices showing

competency of each kidney, following the injection of methylene blue, etc., etc., some minutes previous to an examination. I will go no further into functional diagnostic methods at this time.

Sixth, activity of urinary secretion.

Seventh, absence of either kidney or double ureter on one side.

Eighth, hematuria following renal colic, tuberculosis of kidney or kidneys, and renal carcinoma.

Ninth, pyuria from ureteritis, pyclitis, pyonephrosis, pyelonephritis, suppurative nephritis, prostatitis and vesiculitis.

Tenth, by exclusion, the presence of an anomalous vessel or vessels to the kidney pelvis, producing pressure on the ureter, and damage or destruction of the kidney.

I think in time to come the cystoscope will be used more in catheterizing the ureters, etc. Prof. R. Kutner in the ² *Zeitschrift für Ärztliche Fortbildung*, September 1, 1908, discusses his method of segregating the urine and applying local treatment to the bladder by suction. The cystoscope he uses has two passages: the outer one is made in such a way that it can be applied at any point of the bladder wall, especially over the mouth of the ureter, and aspiration can be induced with a simple air pump. The other smaller passage, inside the first, allows the escape of the urine accumulating in response to the suction. By suction from the air pump it is possible, he says, to aspirate out from the mouth of the ureter, urine from the connecting kidney as effectually as by catheterization of the ureter, except in blocked ureters or kidneys while it avoids the necessity for the introducing of the catheter, and thus averts the possibility of infection from this source, which, however, I think is rare.

By adapting the aspirating passage to any point in the bladder wall, it is possible further to apply the principle of Bier's suction hyperemia to a bladder lesion. It is also possible to apply a medicinal solution exactly at the point where needed. The outer passage terminates in a funnel-shaped enlargement.

Ureter catheterization is of service in showing the patency of the ureters. For obtaining unmistakable separate urines for analysis, with the possibility of finding bacteria, calculus, crystals, epithelium, casts, and tuberculous material. If found on one or both sides, the degree of competency of either kidney can be definitely shown, thereby giving the surgeon some light concerning the patient's ability to undergo an operation on the kidney or ureter.

It is possible to medicate the kidney and kidney pelvis as has been shown some time ago. Also in pyclitis of gonorrheal origin, etc., etc. Also

* Address of the Section Secretary on Genito-Urinary Surgery.

to determine the capacity of the kidney pelvis relative to hydro and pyonephrosis.

With a bismuth fused catheter for obtaining an X-ray picture, which will differentiate peri-uretero-nephritic shadows, as here shown.

Olshausen and others often use the ureter catheters to prevent injuries of the ureters in their gynecologic operations, as I have seen them do so many times.

The important intra-vesical operations with an operating cystoscope are the removal of small foreign bodies, the removal of ureteral calculi from the mouth of the ureter, the removal of growth by forceps or snare, for examination or eradication, the incision of strictured ureters, the dilatation of the ureter and the crushing of calculi while viewing the stone with the cystoscope. For the medication of vesical ulcers, etc., I know of no armamentarium, that will reveal pathology to a more perfect degree of understanding, and is less of a surgical toy than the proper kind of cystoscope.

Lewis says: "The flexible ureter forceps is capable of³ passing one or two inches up into a ureter, where it may be opened and closed in an endeavor to grasp a stone that may be incarcerated there."

Numerous cases are reported to effect the removal of a stone projecting from a ureteral orifice, by opening the bladder; others in which the same radical measure has been undertaken to permit access to a strictured ureter opening. I believe it would be a rare exception, in which these objects as quoted above could not be accomplished with an operating cystoscope and its appliances, without resorting to such radical preliminaries.

Cabot says: "In cancer of the bladder the early symptoms must be recognized; and hemorrhage may appear either as a constant slight flow or intermittently, in little clots, or in considerable amount. Pain does not show itself usually until the growth is far advanced, but the expulsion of blood clots causes painful tenesmus. Bladder irritation does not usually appear until late in the course of the growth. Clumps of a typical epithelium if abundant are characteristic of the growth. Even in the hands of skilled surgeons cases of bladder tumor often go long unrecognized. The way to avoid this is to look into every bladder over which the slightest shadow of doubt hangs. All papillomas of the bladder become cancerous unless thoroughly removed. Cabot thinks that⁴ operation in papilloma through an operating cystoscope must be incomplete, and there fore cannot be efficient. He says these growths should be removed by open incision,

their removal will cure the condition, and the operation on an early papilloma is comparatively simple. Cancer of the bladder is slow to invade the lymphatic system. The bladder may be divided roughly into two parts, the free and the attached. A cancer on the free portion may be cut out with a good margin of healthy bladder wall about it, but when the growth is in the base of the bladder the removal should be made by the method of Mayo. Palliative operations give comparative comfort and are often well worth the pain and confinement of operation. Watson's plan of diverting the urine from the bladder by double nephrostomy is worthy of consideration and commendable.

The Luys' separator properly used for diagnostic purposes is a useful step in this field of endeavor. Surgeons in Europe criticise us for the too free use of the exploratory incision. If this be true the criticism is just. Intelligent study of the signs and symptoms will usually direct the experienced surgeon to a correct diagnosis, however, as Deaver says: "The⁵ diagnostic refinement must not be carried to the point of the loss of the patient as in cancer of the uterus or bladder the certainty of diagnosis by symptoms alone leads to failure of cure. In cancer of the stomach it is unfair to the patient to wait for positive signs or to rely entirely on laboratory tests.

Visual demonstration is the most reliable of all diagnostic determinations. Hence the great value of the cystoscope, skiagraphy and exploration; however, he who rushes to these demonstrations, before attempting to establish a conclusion by bedside examination, appropriate analysis and deductive reasoning will soon blunt the edge of his diagnostic discernment⁶."

Barringer reports twenty-seven cases in which Luys' separator⁷ was used with very accurate results. It seems hardly necessary to mention that urine collection must be simultaneous. The errors which may arise when either the ureteral catheters or Luys' separator is used readily divide themselves into three classes: First, Mechanical; those arising from faulty instrumentation, and resulting either in failure to collect all of the urine flowing from each kidney, or causing a mixture of the urines. Second, reflex oliguria, or polyuria, caused by the instrument. Third, collecting the urines at inappropriate times. With care both ureteral catheterism and separation give accurate results, and all of the urine may be collected from either side. More care is necessary with the ureteral catheter than with the separator, as with the former in a certain number of cases, an extra catheter flow is induced. In thirty-eight

cases and forty cases, seventy-eight cases in all, Barringer stated he had very absolute and accurate results with the separator. I believe two factors are necessary with ureteral catheterism to give accurate quantitative results; first, a catheter with a terminal opening; second, Albarran's method, of methylene blue injection into the catheter, and its non-appearance in the bladder excludes extra catheter flow. As to polyuria the occurrence for longer than two hours is rare, and it is bilateral. The separator may also cause oliguria but less often than the catheter, being bilateral, however, in either case, the end results are not influenced.

After meals the healthy kidney produces temporarily much more urine, and the diseased kidney is modified but little in its habitual function.

When polyuria exists, a less grave lesion is usually present than when oliguria exists.

Polyuria with increased urea is most frequently found in pelvic stone, and next in tuberculosis. Irritation of stone may cause increase of urine and of urea. A comparison of urea indicates very accurately the extent of pathological changes in the kidneys. Foreigners have been hurling at us for a long time, long and tedious techniques for functional diagnosis and Keyes says none have been convincing to the profession at large.⁸

The estimation of what the kidney is actually doing is obviously very much the most accurate way of finding out what that kidney actually can do.

Wildlotz reports 100 cases of nephrectomy. He has⁹ never had a mishap by trusting implicitly to devices for intra-vesical segregation of the urine.

In one case the bladder was so contracted no instrument could be used, in another case no decisive information was given until the ureters were catheterized.

The Luys' separator is advantageous in functional diagnosis, where the condition of the bladder has been previously determined by the cystoscope. As, for instance, if further functional tests are necessary to be made to determine the capacity of the kidney, and the bladder is known to be normal, the separated urines, may be examined with some degree of certainty. In purulent cystitis and other bladder diseases, I think separation for functional purposes uncertain and unscientific. My investigations lead me to think that ureter catheterization is the best known method for functional kidney diagnosis, and I hesitate to use the separator notwithstanding the brilliant array of investigations and reports bearing on the use of the instrument. In those

cases of violent and prolonged haematuria, where an irrigating cystoscope cannot be used, separation for functional tests can be used. In those cases¹⁰ of prostatic enlargement in very old men, where general, spinal or gas anaesthesia is contra-indicated by the condition or conditions present, and where a surgical operation of a more radical procedure is contra-indicated, or refused by the suffering patient, and where the desire for urination is very frequent and the residuum is large, the technic and instruments of Goldschmidt, which I now demonstrate¹¹ to you, are very useful. Under local anaesthesia, of 2 per cent. solution of nova cocaine, the obstruction, especially if a bar or medium projection, under the guidance of the eye can be incised, and the obstruction removed. With the old Botinni instrument or the¹² instrument modified by Freudenburg, the ability to guide the cautery with the eye was practically nil. I think this new technic of Goldschmidt, and used by others, especially my preceptor Wossidlo, will revolutionize this procedure and in selected cases minimize the danger of a severer operation, and greatly add to the comfort of the patient. It was my privilege to see a large number of cases operated by Goldschmidt, Wossidlo, and others with exceptionally favorable results. All the operations on the posterior urethra can also be done, as cauterizing the folliculus seminalis, posterior urethra, for removing papillomas, etc., etc., for examinations of the sphincter, prostate, posterior urethra, etc. Severe cystitis or pyelitis is of course a contra-indication to this method. Where the lateral hypertrophy is very large it is also contra-indicated.

It is especially indicated in the beginning of prostatic hypertrophy where residual urine is present and retention has not taken place; to incise the lobes, and in this manner prevent or retard further enlargement.

Multiple incisions cause a contraction of the gland. It is also indicated in arterio-sclerosis and extreme tenesmus with very frequent urination. In other words, in the two extremes of the disease the alpha and omega, the beginning and the ending.

If one out of every four cases of prostatic hypertrophy is cancerous, and perhaps due to the increased irritation of the urine, on a hypertrophied gland, which in the beginning was a benign enlargement, this method of treatment offers hopes of preventing cancerous development by relieving the increased tension and pressure on the gland, and decreasing to a marked extent the residual urine. In any event the dangers of delay are reduced to a minimum, in those cases where

cancerous development is inevitable and not preventable, and in the hands of those familiar with the cystoscopic aspects of the growth not to be considered a serious drawback to its use.

The prostatic urethra is usually always thickened in beginning cancerous disease of the prostate, and the prostate, vesically, slightly nodulated, perfectly clear to those skilled in the use of the posterior urethroscope. If this proceeding will stay or prevent cancerous development of this organ in even a small number of cases in the inception of the condition, its use must become a fixed proceeding in surgery.

ILLUSTRATIVE CASE.

The case which I will report was physically symptomatic of cystitis, and was very interesting clinically. Dermoid cysts occasionally occur in the bladder wall, and are diagnosed by the passing of hairs, etc.

Echinococic cysts grow in the pelvis and burst into the bladder. They rarely develop in the bladder wall. In all tumors or growths of the bladder cystitis or pain is the first symptom usually. Hemorrhage and acute inflammation are often present.

Excision after cystotomy of large cysts after location¹³ with the cystoscope can be employed. Resection of the bladder is not indicated for any cystic condition of the bladder, which is of a malignant type or accompanied by malignant growths. Urachus cysts are very rare, and are a congenital condition. Cystic degeneration of the bladder wall is also very rare. A case reported by Parodi had atheroma of the aorta, and peripheral arterial sclerosis, bronchitis and pulmonary edema. The pelvis of each kidney was normal, as well as the ureters and urethra. The bladder walls were contracted and presented a slight grade of cystitis, with marked cystic degeneration of the sub-mucosa. The cysts were the most frequent in the posterior-superior portion. On microscopic examination solid epithelial nodes were noticeable; with a tendency to degeneration in the center. Other nodes had become cystic by continuation of the degenerative process; the cavity of the cysts were filled with an amorphous material and degenerated epithelium. The nodes and cysts were independent of the vesical epithelium; there was only a slight degree of inflammation of the mucosa of recent origin; there was nothing to account for the origin of the cysts; they had not the characteristics of true adenomatous formation; and they were not located in any one portion of the bladder, but distributed over its entire surface.

A young single girl† was referred to me some

years ago who had for a number of months been suffering from what was considered a violent cystitis. Urination was quite frequent and very painful. The case resisted all ordinary forms of treatment. A cystoscopic examination was made and the urethra being very small, the instrument was passed with much pain. The mucous membrane of the bladder was red, congested, and the region of the trigone violently inflamed. On the posterior wall a mass as large as a hickory nut, which could not possibly have been bullous edema, was found, and on close examination proven to be a cyst of the bladder wall. I incised the cyst through my cystoscope.

In December of last year the patient again appeared at my office with a recurrence of the symptoms and another cyst was found. I again incised the same through a Bransford Lewis operating cystoscope and cauterized the base with pure carbolic acid. Relief was soon experienced and the symptomatic cure was rapid and I trust permanent.

PHANTOM DEMONSTRATION.

A number of different examining cystoscopes were exhibited; and the Bransford Lewis universal operating cystoscope, and the Nitze operating cystoscope were demonstrated with the Frank Phantom. The intra-vesical cautery, stone crusher, and snare were shown. Also the Thompson evacuator and Keyes' lithotrite were demonstrated. The advantages of the Luys' separator was thoroughly gone into. The Kolischer Shears and the Goldschmidt prostatic incisor for treating prostatic hypertrophy were also demonstrated.

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DISCUSSION.

Dr. Nelson, Cincinnati: I have nothing to add, because I have not used an operating cystoscope. It seems to me that an inspection of a hypertrophied prostate would hardly yield anything.

† Reported in the Medical Council.

As far as the segregator is concerned, you can see the constant moving in the trigone and you cannot control it at all. Then, again, when you use a segregator, you must be sure that you have a perfectly normal bladder. Many times you don't know that you have a normal bladder. If you have a cystitis you don't know whether it is due to the bladder or the kidney. Unless you can positively eliminate the bladder and be sure it is normal, you cannot make a definite diagnosis.

Dr. Keller, Toledo: I wish to agree with Dr. Harpster that the Nitze operating cystoscope is partly useless. The best is the one by Dr. Young. In this there is no obstruction to the view. The simplest is the ordinary cystoscope. The instrument of Dr. Goldsmith is beautiful, but not of much value. When it comes to diagnosis in the posterior urethra the one thing of importance is color. This gives an anemic appearance. It gives a beautiful exposition of the colliculus, but I believe you have to take out a chunk and examine microscopically to make a diagnosis.

Dr. Young's is also good.

The Luys' segregator is very injurious. It should not be used where there is any inflammation. I would not use it as a separator of urine.

The cancerous prostate ordinarily does not show in the bladder. Most all cancers of the prostate extend up behind the bladder. The one diagnostic symptom is that you do not see any enlargement in the bladder.

Dr. Hagner, Washington, D. C.: I think that everybody has trouble if the catheter is friable. Do not use the fluid too hot. Just have the chill taken off. Sterilize in bichlorid and wash in normal saline solution, then allow catheter to stand in another basin of ice cold water. Let it stand in that and it makes catheterization easy.

Dr. Keller spoke of diagnosis of cancer of the prostate. It is one of the hardest diseases I know of to diagnose early. Late diagnosis can be made by any one. We have to go on the nervous symptoms mostly. Some of them do have intra-vesical enlargement, and can be demonstrated by the cystoscope. At times we are justified in exploratory operations to examine a piece of the gland.

Dr. Harpster (closing): I have tried to make myself plain and may have failed. I do not endorse the segregator because I have shown it; but, as I stated in my paper, only occasionally is the segregator used. I must emphatically agree that where any inflammatory conditions are present it should not be used.

Regarding the Goldsmith instrument. Time must work that out. Dr. Goldsmith is not in a position to say just what the results with that instrument will be ultimately.

Regarding the different operating cystoscopes. I state again, it is very difficult with the Nitze snare to snare a tumor, but it is very simple to pick up a foreign body with the crushing instrument or intra vesical forceps; and with all these instruments much practice is required to become expert. In the hands of Nitze and his assistants, or Casper, many difficult intra-vesical operations have been made. I must agree with Dr. Hagner that prostatic enlargements do show in the bladder with the cystoscope.

TWO INTERESTING LIVER CASES.

E. W. MITCHELL, M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

Miss R., age twenty-six years, came to my office October 21, 1908, stating that two or three days previous her family had noticed that her skin and eyes were yellow. Had never had any serious illness. During the summer, had traveled in Europe, visiting Italy, Germany, Switzerland and Sweden. Had no illness during her trip. Returned and resumed her work as teacher in the public schools about the middle of September. Menstruation had always been regular up to last July, since which time it had not appeared. Appetite was fairly good, bowels regular, she had not felt ill except for some weariness and want of endurance. Had never indulged in alcoholic liquors. Upon her return from abroad her parents had observed that her complexion was darker than usual, ascribing the same to tanning from exposure to the sun. No yellowness of the conjunctivae was then noticed. Patient of slender build, weight 116 pounds, thinks she has not lost weight; looks well nourished; skin and conjunctivae rather deeply jaundiced; mucous membranes somewhat pale; Haemoglobin (Tallqvist) 75%. No enlarged glands. Lungs and heart normal. Abdominal examination negative except slight enlargement of the area of the liver dullness. Spleen not palpable. She states that the stools were very light in color and the urine very dark. Urinalysis negative except presence of bile. She was given fractional doses of calomel, phosphate and sulphate of soda, with regulation of diet. She continued her school work up to the thirtieth; was then advised to stay at home on account of increasing lassitude and want of endurance. Physical examination October 30 shows the abdomen somewhat distended, mainly due to gaseous accumulation, but ascites indicated by dullness in the flanks. Liver two fingers' breadth below the costal margin. Spleen palpable. Treatment, salol, phosphate and sulphate of sodium, colonic irrigation.

November 3, jaundice about the same, abdomen more distended, liver dullness three fingers' breadth below costal margin, spleen palpable one and one-half inches below the ribs. Examined by Dr. Sigmar Stark.

November 5, had a severe diarrhoea and some vomiting, felt much prostrated. Between the fourth and sixth the jaundice increased very greatly, the skin becoming a dark mahogany, conjunctivae and mucous membranes a deep yellow.

Abdomen greatly distended, the distension being partly due to gas in the bowels and partly to ascitic fluid. The temperature has continued normal or a degree below normal; pulse, 70, soft and compressible.

On the morning of the seventh, a soft systolic bruit at the base was the first abnormal heart sound heard. On the eighth this had become harsh, well transmitted, with accentuation of the second sound, and with enlargement of the area of cardiac dullness. Urinalysis made on the fifth had shown neither albumin, casts nor sugar, no tests being made for other substances. On the seventh the secretion became very scanty. Sample analyzed by Dr. May Dreyfoos, as follows:

Sp. gr., 1021.

Heavy trace of albumin.

Fehling's Sol. reduced

Bismuth not reduced.

Bile, very large amount.

Indican, green reaction.

Diacetic acid, negative.

Urobilogen, negative.

Microscopic:

Considerable amount of mucus, epithelium and leucocytes.

Hyaline, finely and coarsely granular casts.

Waxy casts, bile stained, a few red blood corpuscles.

Tyrosin and leucin present.

Blood examination, by Dr. A. J. Bell, November 8, 1908:

Haemoglobin, 50 per cent. Reds, 2,087,500.

Whites, 15,000.

Reds, little or no poikilocytosis, some lack of

uniformity in size.

Whites, differential.

Polymorphonuclears 74%

Small mononuclears..... 8%

Large mononuclears..... 4%

Eosinophiles 14%

The temperature ranged from 98° to 99° until a few hours before death, when it rose to 100.2°. There were several loose stools daily, urine very scanty. On the tenth delirium and great restlessness developed, finally giving place to profound coma; heart and respiration gradually failed and death occurred on the fifteenth, about four weeks after the first distinct symptoms were observed. Dr. Forchheimer was associated with me on the case during the last week.

Post mortem made eight hours after death:

All tissues deeply bile stained. Lungs normal; heart, muscular wall flabby, cavity somewhat dilated, mitral valve reddened, showing a few fresh vegetations, other valves normal. Stomach and intestines normal. Pelvic organs normal. Large amount of fluid in abdominal cavity. Liver lying high up under the ribs, about normal or slightly below in size: edge thin; consistency, hard; sur-

face very roughly nodulated; on the cut surface the lobules stand out as yellow islands surrounded by broad gray bands of connective tissue. No obstruction of bile ducts. Gall bladder about the size of a thumb, contained about a drachm of very dark semi-solid bile. Spleen about double normal size, greatly congested. Pancreas apparently normal. Kidneys somewhat enlarged, congested and bile-stained, capsules stripping easily.

As our local microscopists disagreed in the microscopic diagnosis, most of them pronouncing it acute yellow atrophy, my associate in the case, Dr. Forchheimer, forwarded a piece to Dr. Wm. H. Welch with a request for his opinion. His report is so interesting and instructive that I give it in full.

Copy of letter sent Dr. Forchheimer by Dr. Wm. H. Welch, December 21, 1908:

My Dear Dr. Forchheimer:

I enclose the report of my examination of sections from the interesting specimen.

There is a good deal of discussion nowadays about acute yellow atrophy, some going so far as to question the existence of the affection as an independent disease. I am not of this opinion. We have not had more than two or three cases of acute yellow atrophy here since I came to Baltimore, but I used to see it two or three times a year at the autopsy table in New York, and am quite familiar with the typical cases. I think your case is primarily cirrhosis, with extensive regenerative changes, followed by extensive degenerative lesions.

These cases, I know, simulate acute yellow atrophy, but I should not identify the processes.

EXAMINATION OF SPECIMEN OF LIVER.

The specimen is a good-sized piece of hardened liver. The surface is rather coarsely nodular, the nodules varying in size. The color is greenish, evidently from jaundice. The texture is firm.

The microscopical sections show strands of richly cellular connective tissue surrounding larger and smaller areas of liver tissue. These strands contain many so-called newly formed bile-ducts and also clumps of liver cells, these cells occurring both in small groups, even singly, and also in masses approaching the size of a lobule. While many of these liver cells, thus included in the connective tissue bands, are well preserved, others are in various stages of atrophy, necrosis or fatty degeneration.

The bands of connective tissue are richly infiltrated with cells, chiefly of the lymphoid type, with also many fibroblasts.

The areas of liver-cells which are surrounded by the coarser strands of connective tissue, vary in size from those about 1-mm. in diameter, to those 10-m. or even more in diameter, although these latter are further subdivided by more delicate strands of connective tissue. The liver cells within these areas are extremely fatty, some containing single large droplets, others showing numerous small globules of fat.

The nuclei of the liver cells are in general fairly well preserved, although some nuclei are small

and atrophic, and cells devoid of nuclei occur. There are also some large nuclei, rich in chromatin, and not uncommonly cells with two or three nuclei are seen. There is evidence in places of hypertrophy and of hyperplasia of liver cells.

The liver cells contain bile pigment, both in granules and diffusely.

The outer capsule of the liver is thickened irregularly, in some places considerably, in others but little.

No important changes are to be noted in the larger blood vessels and ducts which appear in the sections.

Diagnosis: Cirrhosis of the liver.

REMARKS.

There are several interesting features of the specimen. In the first place, accompanying destruction of the parenchyma there has been extensive regeneration, as is indicated by the size and architecture of certain hepatic lobules, and by the evidences of hypertrophy and hyperplasia of hepatic cells. As is now well known, such regenerative or hyperplastic processes are not uncommon in connection with hepatic cirrhosis.

In the second place, there is extensive fatty degeneration with necrosis of liver cells, as above described. The cirrhosis process, notwithstanding its extent, appears to have been rather rapid, as is indicated by the delicate character and rich cellular infiltration in many parts of the newly formed connective tissue, although there are places where the tissue is dense fibrous. Then the large number of small groups of liver cells, enclosed within newly formed connective tissue, speaks for the rapid progress of the cirrhotic process. As to the type of the cirrhosis, this has features of both the so-called hypertrophic cirrhosis, and of the ordinary portal cirrhosis of Laennec, as is evident from the foregoing description. As is often the case, the lesion does not belong sharply to either of these types, but perhaps the hypertrophic type may be considered as predominant.

As to the question of acute yellow atrophy, raised in the letter accompanying the specimen and suggested by the clinical character, I should not regard the process as acute yellow atrophy in the ordinary sense. As is well known, cases of cirrhosis of the liver, particularly the hypertrophic type, may terminate with symptoms of acute yellow atrophy, and in these cases extensive, degenerative lesions, resembling those of acute yellow atrophy, may be found in the liver, as in the present instance. It would appear that acute yellow atrophy may occur as an independent disease, and that similar lesions and symptoms may also occur in the course of chronic affections of the liver, particularly in cirrhosis. I should classify the present case in the latter group. To what extent, however, the lesions in the latter group of cases are really identical anatomically and etiologically with those in genuine acute yellow atrophy is, I think, an open question.

To sum up, the liver in the present case shows the lesions of a rapidly progressive cirrhosis, with predominance of the hypertrophic type, with at one period of the disease evidence of extensive so-called regeneration (hypertrophy and hyperplasia) of the liver cells, and a terminal extensive fatty degeneration, necrosis and atrophy of parts of the liver.

WILLIAM H. WELCH.

I have hesitated to add the report of the second case to that of the first because it loses a great deal of its value in the absence of a microscopic examination. The physician with whom I saw the case, Dr. Scholfield of Charleston, W. Va., kindly sent to me by express a piece of the liver, but unfortunately the preserving fluid was too weak and there was delay in the delivery, so that by the time the specimen reached the laboratory it was spoiled for microscopic section. However the case presents so many features resembling Case I that I present it for what it is worth:

CASE II.

C. J., age seventeen years. In infancy and early childhood had good deal of "stomach trouble." Had all the diseases of childhood rather severely, but up to the onset of the present illness was well developed and fairly well nourished. Six months ago had gonorrhea and chancroids; recovered under treatment. About eight weeks ago had chance with the typical secondary eruption which was just fading at the time I was called to see him on April 13. For five weeks previous to my visit he had had gradually increasing jaundice, now very intense. For two weeks he had had frequent vomiting, coming on three or four hours after eating, without much nausea, with a feeling of relief after the vomiting. He was obstinately constipated; no pain; no headache; very little itching; no fever until two days previous. Liver had been enlarged, but diminishing in size during the last few days. Stools clay colored. The urine, free in amount, had contained bile and traces of albumin. He had been under thorough anti-specific treatment from the first appearance of the eruption.

On the morning of April 12 he had complained of feeling queer; could not concentrate his mind; spent the day in bed, the first during his illness. Pulse, 80; temperature, 98°. At 1 a. m. on the thirteenth he became very restless, delirious, vomited some blood. At 6 a. m. vomited a pint of dark blood. A little later he became completely unconscious, had slight convulsive movements; pupils dilated equally; temperature, 101°. When I saw him in the evening he was profoundly unconscious, in extreme opisthotonos, extremities rigid. Temperature, 101°; pulse, 160. By some little force the head could be flexed and the spine straightened out. Kernig's sign was negative. The abdomen was not rigid; spleen not palpable; area of liver dullness markedly diminished. Spinal puncture was made, a perfectly clear fluid flowing out without any force, half an ounce being obtained. The microscopic examination and culture tests of this fluid made later were negative. The patient sank rapidly and died at 1 a. m. on the

fourteenth—about twenty-four to thirty-six hours after the development of icterus gravis.

The following report of the post mortem was kindly sent me by the attending physician: (Only abdominal cavity examined.) Liver seemed rather smaller than normal; normal naked eye appearance as to color, but after cutting into it was deep brown for about an eighth of an inch, then still deeper was a mottled brownish yellow color. All the glands around the bile duct and gall bladder were enlarged; there was no obstruction to the duct. Gall bladder normal in size, contents squeezed out without difficulty. Common duct normal, not obstructed. Stomach greatly dilated, holding without distension two quarts. At the pylorus a firm hard ring constricting the opening so that a lead pencil could not pass through it. Spleen not enlarged. Kidneys not enlarged.

URINALYSIS.

Urine was dark brown, heavy yellowish white sediment.

Neutral reaction.

Sp. gr., not determined. Too small an amount of urine.

Albumin, a trace.

Sugar, negative.

Ehrlich's aldehyde reaction, a 2% solution of para dimethyl amino bromaldehyde in hydrochloric acid), negative in the heat and cold, signifying intense destruction of the liver substance.

Bile abundant.

Morner's reaction (using a reagent consisting of 1 c. c. of formalin, 55 c. c. of concentrated sulphuric acid and 45 c. c. of water) gave a slight greenish shimmer on boiling with an aqueous solution of the concentrated urine, indicating the presence of only a trace, if any, of tyrosin.

MICROSCOPIC.

Many red and white corpuscles, granular, epithelial and blood casts.

Many spermatozoa, squamous epithelium.

Crystals, very much like tyrosin were present in the sediment, typically sheath-like, stained yellow, however, easily to be differentiated from uric acid crystals, but not from bilirubin which occasionally crystalize out in a similar way. The absence of a decided greenish coloration on treating with Morner's reagent would speak against the presence of a large amount of tyrosin, but the heavy color due to the bile might have covered over a faint reaction.

Leucin crystals were not found.

RESULT.

The urinalysis would indicate marked degenerative changes in the kidneys and liver.

The liver is an organ so complex in its anatom-

ical structure and so complicated in its physiological functions that it might *a priori* be expected that its pathology would present much complexity, as is so well illustrated in Case I. It is not strange, then, that the clinician frequently has difficulty at the bedside in classifying his liver case according to his text books, nor that there should still exist considerable confusion in the text books as to classification. Adami says in reference to cirrhosis that this confusion is owing to the difficulty of bringing clinical symptoms into harmony with anatomical appearances found *post mortem*, and even more from the lax use of terms. "Particularly unfortunate are the terms atrophic and hypertrophic as applied to cirrhosis, for at best they are merely relative and moreover have been used in an erroneous manner as synonymous with enlargement and diminution in size." We have, however, no other terms in general use at present to substitute for them, and confusion might be avoided were their use confined to their *histological* significance as employed in this interesting report of Dr. Welch's.

That the rapid clinical course was not merely apparent, is indicated by the microscopic report.

The question as to whether this (i. e. Case I) was a case of acute yellow atrophy of the liver was not only suggested by the symptoms during the terminal stage of the case, but also by the fact that some of our local microscopists pronounced it acute yellow atrophy from study of the sections. The fact that the gross appearances of the organ were not those described as characteristic of that disease, led us to send the specimen to a high authority to settle the question. Some text books (e. g. Pepper) speak of this terminal condition as a *secondary* acute yellow atrophy as distinct from *primary* or *idiopathic*, which seems to me a good classification. The whole picture is one of *toxic* action. Whether from bacterial invasion or from "autogenic" origin the present state of our knowledge does not enable us to determine. In favor of the former is the apparent absence of constitutional causes to initiate the morbid processes and the relatively acute course of the disease.

REMARKS AFTER SECOND CASE.

Both cases were in young subjects. Both began insidiously with all evidences of a simple catarrhal jaundice and were so looked upon until considerable and rapidly increasing enlargement of the liver showed they were of more serious nature. In both jaundice was very marked. In both the liver shrank rapidly in size as the symptoms of *icterus gravis* developed. In the lad this condition developed more abruptly and terminated in death in the surprisingly short time of

thirty-six hours. In the young lady the development was somewhat less abrupt and the duration several days. In both the terminal clinical pictures most closely resemble acute yellow atrophy.

Dr. Welch's remarks cover the subject of the pathology so thoroughly that further comment would be superfluous. In regard to the second case it might be added that the statements as to the gross post mortem appearances as well as the appearance of the piece of liver received do not quite answer to the description of the organ in the "idiopathic" acute yellow atrophy. The piece had a firm, fibrous feel, though the surface was smooth, not nodulated. I am inclined to classify it with Case I rather than as a case of true, primary acute yellow atrophy. Such cases as these (and it is true that cases of cirrhosis not so very rarely terminate in a similar manner), it seems to me, do raise the question as to acute yellow atrophy being an independent disease.

In Case II the jaundice was supposed to be the catarrhal jaundice which is occasionally seen in the secondary stage of syphilis and which usually subsides under the anti-syphilitic treatment. The question as to etiological relationship is much disputed, many authorities believing the jaundice only a coincidence, others as positively that it is due to a syphilitic process in biliary ducts. Some of the text books state that in rare instances these jaundiced syphilitic cases terminate in acute yellow atrophy. In this case the enlarged glands would suggest that there was indeed a syphilitic process as the cause of the disease of the liver. It would have been most instructive could we have proved or disproved this supposition by the microscope.

DISCUSSION.

George A. Fackler, M. D., Cincinnati: I think in the discussion of this case my remarks must be largely retrospective. That is, without the clinical picture and the report of the pathologists at hand, we cannot go into a diagnostic review of the case.

I think it was a wise course to report this as an interesting specimen, rather than a rare and unusual specimen, because it is not unusual to find in the pathological examination the true form. This is, then, a background. We can by reviewing the case find certain points of profit for use hereafter. When we review the case we find reason to make a different diagnosis than yellow atrophy, because we know the men in charge of the case would not make a mistake.

I believe we make a mistake by adhering too closely to the sharp distinction between the hypertrophic and atrophic cirrhosis. I think if we should simply adhere to the term "chronic hepatitis," it would help us to assign it to its proper place in pathology. It is reported by some that in certain cases the disturbance is multilobular and in others unilobular. Flexner has stated that in some cases they are inter, and in some intra-

lobular. So these cases may lap over, one to the other, and in some we have the one condition predominating and in others the other. I believe, in reviewing the case, that Dr. Mitchell could in a second case make the diagnosis as shown by the pathologist, the case of the one who was rather young, with considerable jaundice, and then going on till the ascites occurred. It seems as we go back over the case we can picture, as the pathologist has pictured, there was a unilobular first, and then a multilobular, and the symptoms are not so unusual in cirrhosis of the liver. I believe most of us have not escaped noticing the crises in which the patient shows such symptoms as described in the paper. They simulate yellow atrophy of the liver.

Dr. Hoover, of Cleveland: I think one should not be led too far with the interpretation of the pathology. I think we will all be convinced of the futility of learning much about the origin from the histology. I do not think one should depend on a purely histological basis. Whether you have a hepatic cirrhosis from over-eating, from use of alcohol, or syphilis, the histology may all present the same appearance. So I think there is precious little to be drawn from the histology of the liver. I had an experience with a young man about nineteen years of age, who came to the hospital with a large, hardened liver, a large spleen, with a picture of hypertrophic cirrhosis and jaundice. We made puncture of the liver and the spleen and recovered a large amount of bacilli which we could not classify, but it was of the colon group. Then we made puncture of the base and got the same bacteria. So here was a basis for saying he was suffering from a cirrhosis and was sick with an infection. Now, supposing he had developed his infection, at the histological examination he would have presented the same picture as here described. While he had been suffering from an infection all this time, death occurred not so much from the hepatic disease as the infection which caused it. We should pay attention to the possibility of general infection, and probably we would often find we would get more instruction from the examination of the blood than from the histological examination of the liver.

In the second case we must not forget the possibility of a syphilitic liver. It is not proven that he had a sufficient quantity of mercury. It is not uncommon to find syphilitic exacerbations which will respond to treatment, and yet develop a syphilis of the nervous system or the other viscera.

Dr. Kline, of Portsmouth: The laity believe the liver is the scape-goat of many things. The doctor's paper, together with the discussions which have followed, have largely interested me in that it brings up to my mind a case that I met some twelve or fifteen years ago. When it first came under my observation there was extreme ascites. I removed two gallons of water, and I found there was a very large cirrhotic liver. Family history negative; no syphilitic history. Yet here was a hardened liver that extended below the floating ribs, with indurated surface. That patient remained under my care three years, and I aspirated him 200 times and drew 400 gallons of water from him. He at-

tended to his business up to a few days of his death. I do not know today exactly what was the condition of that liver. I was not allowed a post mortem examination, which I should have been glad to have made. I wish to say that the liver became much contracted before death. The only time I could tell anything about the size was when the aspiration occurred. The first year I think there was very little change.

Dr. Greiwe: I believe Dr. Hoover has struck the keynote when he says that we should pay less attention to the histological examination than to the other factors in the case. The main thing would be to establish the etiological factor. Dr. Mitchell has made out as far as possible a case of syphilitic cirrhosis in the second case. In the first case the evidence of degeneration when hand in hand with the evidence of regeneration. These things take place when we have an infection or some stimulation in that neighborhood, and I have seen it in marked degree in connection with the gall bladder. One of the worst cases I ever saw was in connection with a stone in the common duct. We could watch the enlargement of the liver, and on the removal of the stone, all the evidence disappeared. In that case the liver had all the appearance of fine granulations. We were dealing with a subacute inflammation of the liver due to stone, and some infection occurring at the same time. But with the relief of the obstruction the inflammation passed off.

Dr. Mitchell (closing): I am much obliged for the discussion. These two cases seemed to me to raise many interesting questions; and in the first case, the unusual feature, as I look upon it, is the very fact of the cirrhosis. I have seen a number of cases of cirrhosis in both the atrophic and hypertrophic forms, in which the termination has been with the symptoms. But the very rapid course in this case, in which positive symptoms were only noticed four or five weeks, with the very sudden development, is, in my experience, unusual. It certainly raises the question whether the whole trouble was not due to bacterial invasion. Unfortunately, we were not able to make cultural tests.

In the second case, whether this was a syphilitic process in the secondary stage of syphilis; we deal commonly with syphilis of the liver in the tertiary stage, but in my experience it is unusual in the secondary stage, and was more than a temporary jaundice, which subsides under anti-syphilitic treatment. But I think this corresponds with the supposition that we have a syphilis of the secondary stage affecting the liver. The post mortem revealed a ring at the pylorus with a great restriction, so that a lead pencil could hardly be passed through it, and a dilated stomach. The question was raised in my mind whether this had not been a congenital hypertrophic stenosis. The child had had stomach trouble many years.

The case reported by Dr. Kline is worthy to be placed beside one I know of. In an old cemetery in London is a head stone; on one side is the name, "Mary Page, died 1700, aged 60 years. She was tapped 245 times and 360 gallons of water removed from her body; and yet in all this time, she never murmured or repined at her lot."

PROGNOSIS IN THE TRAUMATIC NEUROSES.

LOUIS MILLER, M. D.,
Toledo.

[Read before the Ohio State Medical Association.]

There are few diseases, as neurologists are well aware, which have received more attention concerning their prognosis, than the wide group of cases known as the traumatic neuroses; although the specialists have been more or less at variance in their opinions of the subject, yet not so much so as general practitioners and often other members of the profession. This is especially true of those cases which are the subjects of litigation. While much of the disagreement may be placed to the blame of prejudice, attending taking sides with the contending parties, all cannot be thus explained. The difficulty lies partly in the inherent complexities of the conditions with which they have to deal, such as exact diagnosis, partly to the confusions of nomenclature.

In recent years authors are coming closer together in their views of prognosis, but one still reads opinions which give impressions considerably at variance. Oppenheim, for instance, conveys rather gloomy prospects, while Page is quite optimistic. Others say almost all recover after cessation of the suits. These rather unsatisfactory generalizations are due to several causes—to the fact that the patients are so frequently claimants for damages, and hence their statements not always at face value; and to the fact that the disorders are of long duration, and the subjects are so frequently lost sight of, especially by those who are specially qualified and interested in their study. A further reason, it seems to me, is that such functional disorders may vary somewhat in different countries, just as we understand that major hysteria thrives better in France than in England.

However all that may be, it is probably not wisest to overuse generalizations in the prognosis of an individual case. They should serve only as guiding principles. Various individuals, various causes and various degrees of disturbances must be considered carefully in each instance.

My use of the term. "Traumatic Neurosis," means to include only functional disorders resulting from violence, i. e., to say hysteria and neurasthenia and states which cannot be separated clinically from them. The disorder has been designated as accident aboulia, traumatic hysteria, traumatic neurasthenia and with other terms, but traumatic neurosis is comprehensive and will

probably lead to less confusion if adhered to universally. Admitting then that these neuroses do not constitute a distinct disease entirely, but are either neurasthenia or hysteria or a combination of them, we can say in general that the prognosis is that of those two affections. But the statement must be modified in some particulars. The nature of the affection and the outlook are molded by the etiology and the peculiar circumstances which so often surround the individuals affected. Perhaps it will be better to present my conclusions by presenting some of the means more concretely.

In a study and records of seventy-five cases, I have selected forty-three of them, because of being complete to date. The majority have been legal cases, a few were private. In respect to the plaintiffs and defendants of the legal cases, I have examined on the one side about as often as the other, which I hope nearly eliminates a tendency to bias. Of these forty-three cases, twenty-five recovered or improved, and in nine no change occurred or else grew worse.

The recovered cases represent the ordinary types and lighter cases, in which bruises were sustained in collisions, or shocks from electricity, or from stub toes and generally attended by more or less fright. The subsequent symptoms were most frequently of the neurasthenic variety—headache (generally occipital), band sensations about head, dull feeling in head and various paresthesia, tenderness of spine, numbness of extremities, gaseous condition of stomach and bowels, disturbed sleep, nervousness, fears and physical and mental slackness.

Few cases are among the "well-to-do" and when they do occur in this class, I believe they are milder and recover more quickly, all else equal. And this statement does not imply that the more needy class is for that reason dishonest in the matter. But the greater worry over litigation and their affairs can explain much. Add to this that claim agents and attorneys influence them more, and along with the grave prognosis of the attorney's and plaintiff's doctors fix false ideas in a mind already too susceptible. Among the financially able the claim against a company for injuries is only a side business issue and has small influence on the patient's progress. Therefore the economic status of the patient must be considered. To be considered also is the class of medical attendant and attorney employed. If the latter are ignorant or unscrupulous the prognosis is less favorable, for they value financial advantages more than the claimant's health.

Most all of this series of patients recovered so as to fully resume their ordinary occupations

within two years. The shortest time was one month. But not more than two or three went back to work before claims were settled when they were in issue.

There appears to be a lack of knowledge regarding the effects of electrical shocks. In this day such accidents are not infrequent. I have studied several cases, and they form a rather interesting group. From a review of the literature it seems that no known lesion of the central nervous system occurs from electrical shocks, and none in the peripheral nerves except when burned from direct contact. Bailey has stated that electricity has not been known to produce any disease or lesion of the central nervous system, that it either proves fatal or recovery ensues without structural alterations.

My own cases have shown no organic symptoms and all have fully recovered. I will cite two of them.

(1) July, 1909. I was called by Mr. J——, of Fremont, to attend one of his linemen, aged twenty-two, who had received a shock from a traction wire while working on a pole during a thunder storm. This occurred four days before I saw him. He was blinded, dizzy and nauseated. He soon became totally blind and had some deafness, the latter soon subsiding. Physical and ophthalmoscopic examination revealed nothing. On the day I saw him he could distinguish a hand in a good light. In a month he was back at work as well as of yore.

(2) Harris, of Toledo Home Telephone Company, aged thirty-two, lineman. On June 1, 1907, was working during wet weather on a pole and came in contact with a live street car wire, which short-circuited through left shoulder and length of the arm. He saw flashes of light, felt the intense shock and fell unconscious to the ground. He was taken to hospital in ambulance. No bones were broken, consciousness returned and he quickly recovered, excepting that the left arm and hand were completely paralyzed. The company gave him lighter work and paid for his treatment which he received for eight months, or until February, without any improvement. He felt kindly toward the company and no personal injury claims were considered by him. February 3, 1908, I made my first examination of him; the arm was objectively cold and the skin of a purplish tint. The paralysis was flaccid in character and complete to the finger tips. There was glove anesthesia and analgesia to near the elbow. No atrophy, no reactions of degeneration. Reflexes brisk. There was not present the evidence of organic paralysis, and this was strengthened by remembering that I knew of no case of organic

paralysis from electrical shock. Hence, the certain diagnosis of hysterical paralysis. Before treating him at all I presented him in a clinic at St. Vincent's Hospital, where I expressed more publicly my view of the outcome. This impressed the patient as I intended it should, and he afterwards imparted to some one that he had then in the clinic begun to have hope and expectancy of recovery, because he didn't suppose Dr. Miller would be fool enough to tell so many doctors he would get well unless he was pretty sure of it.

The case is instructive as showing that prognosis rests not only upon diagnosis but upon treatment. And I am quite convinced that traumatic neuroses would not be so often the long, wearisome affairs that they are, if they were better handled.

Some of the text-books state that neurasthenia is more favorable than hysteria. I would say that the statement should be qualified. If the patients are treated at home and without thorough system, I believe the above is true. But on the other side, I think that hysteria is more responsive to skilled and vigorous treatment. If the hysterical patients can be isolated and all worries and bad suggestions set aside, the great majority will recover quickly. This is especially true of those free from previous nervous attacks.

On the whole, I believe that the traumatic neuroses do better and recover more quickly and permanently than ordinary cases of neurasthenia, hysteria and vaso-motor disturbances of the same degree. This is providing of course, that they can be submitted to the same favorable treatment. It is practically impossible to cure one, however, so long as a lawyer has the case. Symptoms may be relieved, but little else should be expected. In recent years I have declined to treat one who has a claim, until it is settled or I have very good grounds for believing that it has small, if any, influence.

A somewhat paradoxical point is that numerous and divers symptoms following trauma are not of bad omen. They rather tend to exclude the likelihood of organic changes, but being largely or exclusively psychical expressions, may be corrected usually by psychical measures. The most stubborn and pitiful cases are those possessing one or two main subjective symptoms. These comprise the majority of the nine unimproved cases, and five of these were non-litigants, so that deleterious influence from that source can be excluded. In the class I allude to the trauma has usually been very severe, and of the head, in which fright or mental shock was slight or absent. Several of these cases have resisted our best efforts of treatment.

As examples I will epitomize three: (1) Dr. Thomas, of North Baltimore, brought to me in July, 1908, a man of forty-four, who was an engineer in the oilfields. In March of 1908 he had received a very severe blow back of the right ear from a piece of machinery. He was rendered unconscious. Since then he has complained of pain over right side of head, greatest intensity in right occipital region. The pain is constant, but remittent. Exertion makes him faint and dizzy. There were no organic signs. No legal proceedings.

November 13, 1909, Dr. Donnelly operated at the point of pain, with the hope of finding some removable cause of the pain, but yesterday I received word that, while able to be about some, he cannot work and suffers much.

(2) Will Fisher, of Toledo, had me see a boy who had been suffering for three years from frontal headache, since falling on head. He was rendered unconscious. Physical examination was negative.

(3) A farmer, aged fifty-five, was sent me by Dr. Donnelly in September of last year. He had been run down by a boy on a bicycle, October, 1907. He struck his head on the pavement. Unconscious for an hour, and does not remember the accident at all. Since then he has had intense headaches, is subject to weak spells, especially if he works hard. He also has vertiginous attacks. Treatment relieves but does not cure him. There are no significant physical signs. Neither of the above cases were temperamentally of a nervous type, nor claimants for damages.

One death occurred in the matter of a Mrs. Parker, of Sylvania. She had been in a very bad railroad wreck, in which her husband was killed. She was bruised. This happened a few months previous to my examination. She was able to come to Toledo for examination. Her subjective history was that of a moderate neurasthenia. She was very fat and had a valvular lesion of the heart, but which seemed compensated. A few months later she died, the exact cause of which I do not know.

There are many details other than those mentioned, which can well be taken into consideration in estimating prognosis. In general one may say that the clearer the mental origin, the better the outcome, providing always that suitable environs and handling may be had. Occasionally one sees organic disease mistaken for neuroses, and compensation asked. Tabes, paresis and other conditions I have seen manifest themselves on the heels of trauma, but I think that in such instances, the accident merely touched the hair-trigger already set.

I wish that medical men would get into agreement when seeing these cases, and practically insist upon taking a fair stand. It would restore in a large measure, the lost repute of experts, which has become pretty general among lawyers and juries. One first class attorney for a railroad in Toledo has nearly ceased using medical men in his cases. He says he does as well without expert opinions or testimony. I fear it is too true. It is unjust to the client and patient to delay arriving at a fair estimate of his condition and prospects. A doctor testifying or saying to the plaintiff and his lawyer that the man is irreparably damaged and will become hopelessly paralyzed, under the mistaken idea that he is furthering the interests of the patient, is in error. The hardships of the worries of the law's delays and the terrifying suggestions embitter the patient's life, and undermine his morale.

I could many a sorrowful tale unfold in this particular. It is better to urge a quick and reasonable settlement.

DISCUSSION.

Dr. Strayer: I think it is necessary to get as early a settlement as you can with a man. Get them to settle with the people in all cases where there is any settlement to be made, because it certainly cuts a large figure with the symptoms afterwards; that is, the continuation of the symptoms. But, as the doctor says, there are a large number of these cases in which the symptoms will persist for some time. I think we are a little bit too prone to jump at conclusions one way or the other, either taking the side of the patient or taking the other side against him, and to come to a conclusion and tell them they are going to be helpless and immediately throw them into a fresh state of neurasthenia and hysteria and let them go. We all find cases that puzzle us a great deal, and in which we haven't any objective symptoms whatever, and in spite of that go along and prove to be very serious cases. I know one of a very slight injury of the skull, that had nothing but a scalp wound, and he kept drifting along and went into the offices of several men in the city, but all of them had given him up, and he was committed to an asylum not very long ago. Another case, the claim was settled very quickly. The patient went home, and seemed to be in pretty good condition. Came back in two days, and from then on he was very seriously affected, and we didn't expect him to live for several months, just simply because he couldn't do anything—couldn't turn over in bed, couldn't be touched. It has been three years now, and the pain has not wholly subsided, but he is able to get around again. And he had no reason at all for any claim when the serious consequences came on. So we find a great many of them that way, and I think we should as doctors try to take a fair stand towards these cases, and I know from personal experience that railroad companies are getting very chary about the doctor's word on a case, because he is either there against them or for them, and if he

comes into court his testimony is oftentimes not believed at all.

Dr. Ball: Traumatic neurosis is a subject that I have been interested in for a great while, and it seems to me that we haven't done any better with these cases because we haven't properly understood them. They are not properly understood by the profession at large. They have gone into the same category as other functional disturbances, and I think the sooner we get some better conception of the term "functional" the better. To me, in nervous diseases, it means that at the present time we have no apparatus by which we are able to discover the changes which exist, because they are individual changes. Now, in traumatic neurosis, the phases that enter into it are, first, the shock and fright; second, the fear on the part of the patient that he is not going to recover, and if he doesn't recover what is going to become of himself and his family, and third, the desire to acquire something, perhaps, and that inasmuch as he has been made to suffer he ought to be paid for it. And I think, in the analysis of cases of traumatic neurosis, if we will take these things into consideration, that we may expect our patients to get better, very many of them, after the cases have been settled, because some of the factors which entered into them have been done away; some of the things which have caused the disease. Also the suggestions that are made to them by their friends, the suggestions that are made to them by the attorneys with whom they come in contact, and suggestions of the doctors who examine them. They take up suggestions like a sponge takes up water, and there are those four factors which enter into their conditions. The majority of patients, I believe, are sincere, and there is a definiteness about the subject in this, that a patient in St. Paul will present about the same symptoms as a patient in Constantinople, which would not preclude any malingering. These factors will help us to arrive at a proper judgment. We must take into account the trial, the anxiety and worry, the suggestions, the power of that to anybody that is suffering, the thinking that they ought to be compensated in some way, and if we can remove those factors, we may honestly expect our patient is going to get better. I believe we may divide traumatic neurosis into mild, milder, severe and severer. I believe the great majority of them will recover, but I think there are a great many who do not quickly recover; that there are a few who do not recover. And I believe that if we keep these factors firmly in our minds, that we would dignify our profession and help ourselves as expert witnesses to arrive at better judgments in regard to the outcome of such cases. I think traumatic neurosis is a definite disease and deserves a definite place, and it requires the very best judgment that we can bring to bear on it to get the right diagnosis.

Dr. Beebe: As the chairman knows, I have two kinds of recreation. One is getting on the witness stand, and one is attending medical meetings. (Laughter.) Among the cases, of course, we find such as have been so thoroughly depicted by the artists. I think I never have heard the equal of the paper that you have just heard read to you today, going into the matter so deeply and so satisfactorily. If I got his view correctly—I think it is new to most of you—that instead of

calling these nervous it should be traumatic psychosis. Did I understand you correctly?

Mr. Miller: That would be the proper thought. I didn't exactly use that term.

Dr. Beebe: I think that is true. This nomenclature should be changed. These are traumatic psychoses, and further back than that, probably nine out of ten of them were hysterical or neurasthenical before the injury, and, as he started out with the very emphatic and very important remark, that the chief characteristics were inherent. I think that is true. So in order to make a prognosis anywhere nearly correct, you must get way back there in the hereditary constitution and so on and follow it right along up to date. Then as to the prognosis upon other elements. We all agree that in certain cases they get better, if they happen to be court cases, after the court has dismissed the case. In other words, your prognosis can be very much more easily made if you kill the lawyer and just make some suggestions to the patient. (Laughter.)

The Chairman: If there is no further discussion, we will call on Dr. Miller to close.

Mr. Miller: I don't think that I have anything to add, except to say that I agree fully with what the discussion has brought forth.

THE EXTENSIVE SYPHILITIC ULCERATION OF TERTIARY NATURE.

A. RAVOGLI, M. D.

[Read before the Ohio State Medical Association.]

Extensive syphilitic ulcerations chronic and of a serpiginous or circinate type are often found in patients, when the disease has taken a malignant form, when the patient has had insufficient treatment, or has had no care of himself. Quite often syphilitic ulcers follow mild cases of lues, which have passed unnoticed and for this reason very little or no treatment has been employed. Ulcerative syphilitic forms often constitute that which is called syphilis d'emblee. In these cases as in ours no initial lesion, no secondary erythematous eruptions have been noticed, but the ulcerative process has been the first appearance. This occurrence is often met with in the woman who has been infected through a tainted fetus, or in a child born with hereditary luetic taint. It is also possible that after a chancre which has been diagnosed as one of a chancroidal nature, an ulcerative syphilitic process appears a year or two later on the scene and is the first intimation of the presence of syphilis.

Lang has already pointed out cases of syphilis d'emblee in women, who had been infected through conception. Fournier has admitted the possibility of cases of acquired syphilis, in which the way of transmission of the infection was dif-

ficult to establish. Bettman¹ has no doubt as to the existence of a syphilis without manifest primary lesion, which he called syphilis d'emblee. The modern research on the etiology and on the sero diagnosis of syphilis have opened a new field and have explained many problems which for a long time had remained unsolved. The experiments of Neisser on the lower apes show that general syphilis may occur after inoculation with a very small or scarcely perceptible primary lesion. The same may also occur in man.

In many cases of syphilitic infection the genitals are carefully examined and no signs of lesions can be found. Yet there is no doubt that the virus has found its way into the organism either through the interstices of the areolar tissues or through the blood vessels, without first showing the primary lesion.

In these cases the constitutional secondary symptoms have appeared in the form of roseola, or of a papular form. In the case subject of our study we have found an absence of any eruption of a secondary nature, but deep symptoms of general denutrition such as often do accompany malignant lues. Yet the first symptom of the syphilitic infection consisted in the onset of the ulcer as syphilis ulcerosa praecox. This condition has been found by Finger² in several cases of this kind, when it was loss of appetite, loss of sleep, nervous sufferings, and a general running down of the entire system.

My aim will be better understood after reporting the case Fig. I gives a good illustration of the ulcerative syphilide, which we may call d'emblee.

The patient is a colored woman I. L. 20, single, laundress by occupation, strong, well developed, but at present badly nourished and apparently anaemic. Her father died with pulmonary tuberculosis. Her mother is living and in good health. She has brothers and sisters who are also well.

She has been always in good health and has worked all the time as laundress. She was menstruated at twelve, had first a miscarriage at seventeen and recently gave birth to a child, which born apparently well, lived only three months. She has used alcohol and tobacco in small quantities.

She absolutely denies having had gonorrhoea and syphilis. She has never had any eruptive manifestation on the skin. Twelve months ago she noticed a small reddish nodule in her right groin, which increased gradually in size and soon ulcerated. New nodules kept coming fast and disposing themselves in a semicircular manner. The nodules soon broke down, discharging a seropurulent fluid, which, together with the perspiration and the urine, produced a nauseous odor. In

the places where the ulcer was not so moist it was covered with thick, dirty crusts.

She denied to have ever suffered with her throat or with her mouth, which to our examination showed no alteration.

Status present: Although well built and well developed she is at present poorly nourished; color ash gray, mucous membranes very pale. Cervical glands are hard and enlarged, and likewise those of the inguinal region. Chest and abdomen carefully examined proved to be in normal condition. The ulcer on a thick and infiltrated base consisting of red elevated nodules, begins in the upper part of the right inguinal re-

face. Some of the nodules were broken down, some covered with thick crusts, some vegetating forming thick papillae. The right labium is thickly infiltrated, enlarged, elephantiasic, and through the ulcerated surface, adherent to the thigh and drawn downwards. The diagnosis was that of syphilis ulcerosa praecox.

Wasserman test with Noguchi method gave positive reaction. Moro test for tuberculosis negative.

Examination of the urine gave acid reaction—specific gravity 1020—no albumin, no casts, no sugar.

The woman was treated generally with gray



Extensive syphilitic ulceration of tertiary nature. First syphilitic manifestation.

gion, involving the whole fossa cruro genitalis and the labium of the same side. In an irregular serpiginous way it descends down to the thigh involving a large area of the gluteal region, the perineum descending towards the anus. One ulcer was also found on the other side on the gluteal region just on the surface of the skin touching the ulcerated spot of the opposite side showing a local inoculation. An extended cicatricial tissue on the posterior region of the thigh bears witness of more extensive ulceration already healed up. The ulcer consisted of an aggregation of small nodules causing an infiltration of the whole sur-

oil injections twice a week, and internally potassium iodide and an iron tonic. In a short time she improved considerably in her nutrition and in her general health.

The ulcer was treated locally by bathing with 1 to 2000 bichloride solution, and covered with calomel in Wilson ointment, 20 grains to the ounce. The ulcer was slowly improving, yet not fast enough to give satisfaction. The patient was subjected to general anaesthesia with ethylchloride followed by ether.

The ulcer was thoroughly curetted, the labium was detached and corrected, during the operation

it bled profusely. The hemorrhage was checked, the wound was covered with iodoform dressing. The same manner of dressing was continued, the wound was clean, and in a relatively short time healed up completely leaving a soft regular scar.

Pathology. From the report of the case it appears that the ulcerative process has been the first symptom of syphilis, without any initial nor secondary manifestation. It can be considered a syphilis d'emblee. The patient had no reason to conceal anything, she never saw any ulcer in her genitals, nor in the mouth to give suspicion of infection. Yet she was running down in her general health since she had her first miscarriage. This occurrence was three years before the ap-

pearance of the extensive ulcer. At that time she was infected by the luetic embryo through the utero placental circulation, and not suspecting infection, she did not take treatment. The infection remained latent, and two years after showed up in the form of a localized tertiary lesion. The localized syphilitic tertiary process is that of a gummous type or of a diffused infiltration.

Etiology. The necrobiotic changes which take



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Fig. II. Microphotograph taken from a section of the ulcer, stained with hematoxylin and eosin, shows the enormous infiltration of small cells, which invade the connective tissue of the derma, causing necrosis and destruction of the tissues. In the middle of the infiltrating cells can

be seen the fascicles of the connective tissues fairly maintained, although pressed by the infiltrating elements. In the fascicles of connective tissue the corpuscles, and nuclei are affected and fibroblasts are visible in the middle of the collagenous bundles. The blood vessels are numerous and all are affected with specific angioitis, the tunics are enlarged, infiltrated and surrounded by abundant infiltration cells. Between the infiltration cells are often seen large epithelioid cells which are known as giant's cells. The mass of the infiltrating cells, which are only mononuclear lymphocytes is subject to decay and they easily undergo caseous degeneration.

ilitic treatment. Yet it seems that together with the syphilitic process there is some other peculiar condition which causes the syphilitic infiltration soon to decay and form extensive superficial ulcers. Jullien maintained that the staphylococci of the suppuration are the cause of the prompt destruction of the dermal gummata and consequently of the extensive proportion taken by the ulcer.

In some cases the association of syphilis and tuberculosis is the cause of the destructive proportions which these ulcers attain. In our case, however, the Moro test for tuberculosis was negative.

A long time ago Huguier⁴ and others described cases of extensive ulcers of the genitals of the woman under the name of lupus vulvae. The possibility of lupus was however denied by Hyde⁵ and Taylor⁶, who claimed it to be only the result of a syphilitic infiltration.

In some other cases of destructive ulcers of the genitals in the woman, which have occurred in our hospital service it was found that tuberculosis had associated with syphilis. Both diathetic conditions together have had a bad deleterious effect on the whole system. In other cases paludism has had a great debilitating influence on the system and has predisposed the patient to the ravages of the tertiary syphilis. Alcoholism is also a great factor tending to increase malignancy of syphilis. In nearly all cases where the patient has continued in the use of strong alcoholics syphilitic tertiary ulcers are the result.

The lack of cleanliness, the presence of the urine, of the perspiration, the injuries produced by the action of scratching, the rubbing of the clothes are all causes which produce an inflammatory reaction. Through this reaction a quantity of polynuclear neutrophiles come out of the blood vessels among the connective elements. This polynucleosis is constant in all ulcerations, but does not modify the infiltration, which is formed by mononuclear elements. These form a kind of fibrinous coat on the surface of the ulceration, which is not capable of producing cicatrization, and the chronic inflammatory process remains active, spreads and invades other tissues.

The patient did not show manifest signs of cachexia, but she was only weak and anaemic. There was no doubt of the presence of lues which was clearly demonstrated by the Wasserman reaction. It was a case of tertiary syphilis which made its appearance for the first time in its ulcerative form. The great improvement on the general condition of the patient obtained with strong antisiphilitic treatment bears witness to the syph-

ilitic nature of the ulcer. Yet the locality was not much modified by the applications of the mercurial preparations as in all other forms, but remained nearly unchanged so much so that we had to resort to the curetting of the whole surface. This shows that there is together with syphilis some other elements of septic nature, which cause the spreading of the ulcer. Brocq and Simon⁷ have found streptococci on the ulcer in several cases of this kind, and they maintain from the clinical and therapeutical standpoint that this peculiar infectious condition on the syphilitic infiltration is the cause of the extensive and of the destructive proportions taken by these ulcers.

Indeed if the syphilitic process were the only one responsible for the destructive character of the ulcer, the antisiphilitic local treatment would be able to stop the ulcerative process, dissolve the infiltration and bring about recovery such as we see in ordinary cases of superficial gummata. In our case, on the contrary, we have seen that the antisiphilitic treatment has greatly improved the general systemic condition of the patient, but has failed to bring about a satisfactory modification on the course of the ulcer. The surgical treatment, which consisted in curetting and removing the whole granulating surface and then covered with iodoform stopped the process and in a short time brought about a perfect recovery with a smooth and regular scar.

This shows that upon the syphilitic infiltration there is some other factor which causes the spreading of the ulcer, which according to the opinion of Jullien⁸, Gaston, Ribon⁹ et Brocq must be due to the presence of a streptococcic infection implanted on the syphilitic process. In such a case the syphilitic ulcer would assume phagedenic characters on account of a septic condition. The same malignant form may be assumed by any other ulcer chancroidal, tubercular, etc., only when a septic infection takes hold of the infiltrating elements, causing a necrobiosis and destruction. In our experience we believe that syphilitic phagedenic ulcers are more frequently met with in hospital practice than in city practice. They are mostly found in women who do not care much for cleanliness, and the purulent serum together with the excretions form an infectious element which soon dissolves the syphilitic infiltration and causes the spreading of the ulcer.

In this case the interesting feature was the so-called syphilis d'emblee, in form of syphilis ulcerosa praecox, which was the first syphilitic manifestation, which showed deep systemic infection. Jadassohn¹⁰ said that a sharp line of demarcation between secondary and tertiary syphilis

does not exist. In the same way malignant lues do not belong to the secondary or to the tertiary stage. There is no doubt that in cases of deep infection a form of malignant lues is revealed as syphilis tertiaria praecox, in a typical form. The factor seems to be the quantity of spirochaetae which remain in the system, after the stormy secondary symptoms have subsided. These spirilli reproducing and increasing their number, select one or other part of the body, localizing their lesions, which consisting in infiltration easily decay, necrotize and soon ulcerate. Of course the resistance and the reactive faculty of the system to produce antibodies is the principal cause in the occurrence of mild or severe symptoms in the course of the disease.

In our opinion syphilis d'emblee in the true sense of the word does not exist. We believe that syphilis d'emblee corresponds exactly to that which has been called *ignored syphilis*. The spirochaetae have entered the system in small quantities, have had not the opportunity to reproduce themselves in so large a quantity as to form small emboli in the capillaries of the cutaneous surface, which condition shows in the form of roseola. The spirochaetae have remained latent in the lymphatic system where they have proliferated, have produced toxins injurious to the organism and nearly two years after have localized and have produced a circumscribed lesion of tertiary nature. The incubation of the spirochaetae in the opinion of Jadassohn does not necessarily take place in the skin, but it can occur in the lymphatic glands or in any other organ. The spirochaetae entering in the blood circulation in the beginning they are disposed by the antibodies which are soon formed, but gradually they remained unaltered enter the capillaries and produce all those alterations which form the syndrome of the disease.

As conclusions deduced from the consideration of this case we can say that:

First.—The onset of a diffused tertiary ulcer has been the first manifestation of syphilis, syphilis d'emblee.

Second.—That the spirochaetae often produce a localized manifestation in an ulcerative form spreading by regional infection.

Third.—That the condition of denutrition of the system has great influence in the occurrence of syphilitic ulcers.

Fourth.—That the obstinacy and the rapid spreading of the syphilitic ulcer is also due to a septic infection.

Fifth.—That the antisyphilitic applications alone

are not sufficient to bring these ulcers to recovery, but surgical interference is necessary.

¹Bettmann. Zur Frage der Syphilis d'emblee, Archiv. f. und Syphilis, Band C., p. 164.

²Finger. Wiener Dermat. Gesellschaft sitz. 9 Jan., 1907, ref. Arch. f. Derm. und Syph. Bd. 87, p. 440.

³Fournier. A. Traite de la Syphilis. T. II, pp. 414 and 448.

⁴Huguier. Memoire sur l'Estiomene ou dartre rougeante de la region vulvoanale. Paris, 1848.

⁵Hyde, J. N. Journ. Cutan. and Genit. Urin. Diseases. April and May, 1889.

⁶Taylor, R. W. New York Med. Journal, 1890.

⁷Brocq. & Simon. Contribution a l'etude du Phagedenisme Tribune Medicale, Mars 7, 1908.

⁸Jullien. Reflexions sur le phagedenisme syphilitique et le phagedenisme septique. Acts de la Societe Francaise de Derm. et de Syphil. 12 Avril, 1890.

⁹Bizard, Gaston et Ribon. Soc. Franc. et 1902.

¹⁰Jadassohn. Syphilidologische Beitrage, Arch. f. Derm. und Syphilis. Bd. 86, p. 71.

DISCUSSION.

R. S. Walker, M. D., Toledo: I don't just feel capable of discussing Dr. Ravogli's paper as it should be discussed. I have not had sufficient experience in this line. Several things have occurred to me which I could simply endorse. Just as I think over it, those cases affected during pregnancy are the hardest of all to treat successfully, especially where a lesion takes place in the lungs. I had one case some time ago where a severe anemia developed, and I could obtain no results whatever. That has been my experience where we have had delayed signs following pregnancy. It seems in these cases the toxemia is very marked. As to the surgical aspect, I think that there are very good results obtained by surgical procedures. A few months ago a case came to me with destruction of about one-half of the radius. This was cleaned out thoroughly and then the man got along beautifully. I think the spirochaetes are confined to the lymphatic system. Would like to know the doctor's experience in these cases following pregnancy.

Dr. Varney, Detroit: Dr. Ravogli is certainly to be complimented on his paper, as we have had to do often in the discussion of his very interesting report of cases. He has applied every means in the study of this case, so that it has been very interesting the way in which he has presented it. Very few of us can present a case and make it worth while.

I would like to say about the female during pregnancy that my experience has been that a large percentage of cases of late symptoms has been in the female. Our best investigators have demonstrated that the disease can be produced in apes from these tertiary manifestations, so that we must look upon these tertiary lesions as a local infection. Fortunately we see very few of the extensive cases. This may be explained by the fact that we are recognizing our cases of syphilis much more early than in the past. Then, again, possibly we may be becoming partially immunized. The Egyptians may have syphilis, but they do not have the pari-syphilitic lesions. It is rarely we see a case as presented by Dr. Ravogli in this locality. While we are gathering columns of knowledge in this field, there is still a lot to be

learned in regard to the resistance of the patient. Where the patient does not respond after a certain length of time, we should not persist in the treatment. The doctor is to be congratulated for resorting to surgical procedures.

The serum reaction obtained in the late manifestations is in a very small percentage as compared with that obtained in the active secondary or infective stages. Very little attention of the blood is brought into play in correcting the condition which the doctor has presented.

Late manifestations without any primary or secondary symptoms are rather vague to me. I look at it that they have been passed unnoticed.

Walter Irwin Le Fevre, M. D., Cleveland: I am sure we have all been delighted with Dr. Ravogli's very interesting case. Just one point he brought out which should be emphasized, and that is the secondary infection that may occur with the late tertiary lesions. This is certainly very important and we should pay attention to the local treatment as well as the systemic treatment. This gives quicker and better results.

Dr. Montgomery, Youngstown: I used gray oil in these cases several years ago. I had good results with the gray oil I obtained from Cincinnati, but not with that obtained at home.

Dr. Nelson, Cincinnati: I would like to ask Dr. Ravogli when the Moro test was applied: Before the use of the mercury or after?

Dr. Heidingsfeld, Cincinnati: I am sure we are very much interested and instructed by the able presentation of this case, and I concur in all his conclusions. It is the experience of all of us once in a while to meet with late lesions, usually in the female. We have these cases in males once in a while, but it is my experience that where there is a well defined chancre, if well nourished, the roseola does not appear, and our diagnosis is not confirmed until the late symptoms develop. Whether these cases are particularly malignant or not, I have not been able to satisfy myself. In regard to the Wasserman reaction, I want to call attention to one experience of mine in a case of malignant syphilis (that is where they go down rapidly). I have two cases on my service at City Hospital in Cincinnati. These cases have never shown the Wasserman reaction. The Wasserman reaction is a test of the resistance of the patient; so that the mere fact that you do not get the reaction is not positive proof that the patient has not syphilis. Dr. Varney has called attention to the lack of resistance and its treatment. In regard to the tuberculin reaction. This is also not a positive test. Tuberculosis of the skin does not respond to this test. Therefore your tuberculin test would not give you reliable information.

In regard to the vegetating, ulcerating lesions. In these cases I believe there is a secondary infection, and therefore you have to treat the secondary infection. I have used hydrogen peroxide in these cases. I have never found it necessary to curette.

Dr. Ravogli (Closing): I thank all those who have discussed my paper, because I see that they agree with my views. Answering Dr. Nelson's question in regard to the Moro test, would say that it was applied during the treatment. Mer-

cury has some influence on the test. Dr. Walker asks about the toxemia. The toxemia is more marked in women, and I think this is because of the innocence of the woman, therefore she is not treated early. About the possible immunization, I don't agree exactly with the idea of Dr. Varney. I believe it is because the people in general are afraid and know that they can be treated and relieved, so that they start treatment early. About the Wasserman reaction, I have tried it in a man three or four times, and it was always negative, but he died of gumma of the brain. When there are no anti-bodies you cannot get the reaction.

Any case of syphilis is amenable to treatment. It is positively curable if treated early.

NUTRITION OF TWINS AND TRIPLETS.

R. L. JETT, M. D.,
Cleveland.

[Read before the Ohio State Medical Association.]

It is well known that the mortality of twins is very high, so high in fact that many laymen think that one of twins must die before reaching puberty.

Of forty-two babies, embracing eighteen sets of twins and two sets of triplets, who were admitted to the Babies' Dispensary and Hospital of Cleveland, ten died under three years of age. Of those dying, the causes were as follows: Pneumonia, one; tubercular meningitis, one; malnutrition, three; intestinal disturbance, four, and in one case the cause of death was not known. Two primary causes of death are dominant. First, the condition at birth, prematurity or weakling; and, second, lack of breast milk and consequent improper artificial feeding. Of these ten deaths four were premature children and two were full term, but weaklings. Before admission to the dispensary six were breast fed entirely, but in three of these the nursing was very often and irregular, and in the other three it was far from ideal. Of the forty-two babies only eleven could be called well developed and nourished when admitted.

To overcome this high death rate is only a part of the great war against infant mortality, and is almost entirely a question of feeding and hygiene. It is unnecessary to say that twins, and especially triplets, should have careful attention from the day of birth. Mothers usually take it for granted that they haven't enough milk for both or all the babies and unless the physician is careful, the mother will soon be giving some form of artificial food; and when artificial feeding is once begun, the tendency is for the mother to gradually diminish the number of breast feedings and to finally drop them altogether.

One point which unthinking physicians overlook

is that twins at birth are nearly always smaller than the average single child of seven to eight pounds and consequently need less food.

The physician should watch the case from the beginning and use every means to procure enough breast milk. The babies should be put to the breast at regular intervals, not exceeding three and one-half hours. It is rarely necessary to nurse even weaklings more than six times in twenty-four hours. The babies must be weighed at regular intervals and careful records kept of their gains or losses. If it is found to be impossible to supply enough breast milk, supplementary feeding will, of course, have to be resorted to. This should always be fresh cow's milk modified to suit the individual case. When one child is weaker or smaller than the other, the weaker one should be shown the preference in the number of maternal nursings.

When the babies are not brought to the physician until mixed or artificial feeding has been in use for some time, and the babies are going from bad to worse, it is even then sometimes possible to do a great deal of good, provided the mother still has some breast milk. It is often possible to increase the mother's milk to such an extent that the bottle can be entirely dispensed with. There are also many cases in which the mother still has enough milk for both babies and the artificial food is only an added burden and cannot be dropped too quickly.

Of the cases treated at the Babies' Dispensary it was necessary at the time of admission to increase the amount of food in only four cases or eight babies and in ten cases or twenty babies the feeding was reduced. In three of these cases the artificial food was entirely dispensed with. In one, the children refused the bottle immediately after the nursing had been regulated, and in the other two the artificial food was gradually reduced as the mother's milk increased. Of the cases in which the food was increased, in only two cases was artificial food added to the previously breast fed infants.

The following is a brief history of one of the cases in which the bottle feeding was stopped: Rosie and Elizabeth L., Italians, aged 3 wks., who applied to the dispensary for milk on October 7, 1909. Family history negative. (1) Elizabeth. Personal history: Full term. Birth normal. Has been given the breast four times in twenty-four hours, and in addition has had three ounces of equal parts tea and milk three times daily. Digestion has been good and she has never been ill.

Physical examination: Weight, 2900 gm. (6.3 lbs.); fairly well nourished. Examination otherwise negative. Treatment: Breast four times and

in addition two feedings of 120 c. c. of a mixture of milk 40 c. c., water 70 c. c., and 50% sugar solution 10 c. c. On November 8, the child weighed 4225 gm., showing a gain of 1325 gm. in one month, and during the last week of the month she had only the breast. January 4, 1910, weight 5500 gm., showing a steady gain on breast milk. January 12, weight 5975 gm. Occasional vomiting. The mother wants to give more food, but is urged to continue with the breast. January 31, child cries a good deal and sleeps poorly. Mother giving one or two extra breast feedings at night. Urged to give breast only five times and told to give one-half ounce of oatmeal water after each breast feeding. March 1, weight 6800 gm. Getting the breast five times and seeming satisfied. On March 23 the child weighed 6875 gm., or 15.1 lbs. Since that time she has continued to do well on five breast feedings in twenty-four hours.

(2) Rosie L., twin sister of Elizabeth, had had the same feeding as Elizabeth. Has had a sero-purulent discharge from both eyes for two weeks.

Physical examination: Weight, 2250 gm. (4.9 lbs.); poorly developed and nourished. Has marked systolic heart murmur. Sero-purulent discharge from both eyes in which no gonococci could be found. Diagnosis: Simple conjunctivitis and congenital endocarditis. Treatment: Breast six times in twenty-four hours. Boric acid solution to the eyes every four hours. Told to return in two days.

October 11: Weight, 2350 gm.; has been given a little cow's milk; eyes better; urged to give the breast only.

November 8: Weight, 3150 gm.; eyes clear. Bowels moving about three times daily, the stools being green; vomiting a little; still being given cow's milk and tea. Treatment: Castor oil, one-half teaspoonful, continue to give breast six times.

November 26: Weight, 3750 gm. Vomiting a little after nursing. Is nursing seven or eight times daily. Urged to give breast only six times. December 9: Weight, 4025 gm. Child well. Is still getting some cow's milk. December 28: Weight, 4325 gm; doing well; is getting the breast only five times and seems satisfied. January 24: Weight 4900 gm.; vomits occasionally and has a slight cough. Chest and throat negative. Same feeding continued. March 7: Weight, 5350 gm. Is getting the breast five times and is doing well.

On March 23 the baby weighed 5525 gm., or 12.1 lbs. Since then the gain has been steady. The heart murmur is still present but in all other respects the child is in good condition.

In this case it was at first very difficult to convince the mother that the babies did not need artificial food and it was almost impossible to

persuade her to follow directions. In nearly all the cases that has been the chief difficulty and it is only by the most persistent effort that they can be made to realize that the children are being overfed.

It will be seen from this brief report that it is only by persistent effort that much good can be accomplished in reducing the death rate of twins and triplets. The cases must be watched from the outset, careful records kept of their weights, breast milk must be supplied when possible, and when it is not possible to supply breast milk, supplementary feeding suitable for the individual case must be given.

MUSCULAR DEVIATIONS AND SUGGESTIONS OF A NEW NOMENCLATURE.

J. E. COGAN, M. D.,

Ophthalmologist and Aurist at St. Alexis Hospital, Assistant in Ophthalmology, Western Reserve University.

[Read at Toledo during meeting of the Eye, Ear, Nose and Throat Section of the Ohio State Medical meeting, May 11, 1910.]

We are all aware of the confusion of results found by different methods of examination used to detect and record latent muscular deviations. Their very number shows that at present there is no one method eminently satisfactory. Results found by different methods and means involving different physiological and optical principles are taken as synonymous and interchangeable. There is no standard of comparison.

You will see that I am making a definite attempt to record the deviations in the direction in which they occur and in conformity to the axes at present used in trial frames.

A more definite degree of standardization can be obtained if the same shade of dark red glass is used, same sized opening in chart (2-mm), the same distance, (6-m).

Fig. 1* represents a large circular disc with small 2 m/m opening in center for light to shine through. We know that the standard of 1 prism diopter is that strength prism which will deviate a ray of light 1 centimeter at 1 meter. At 6 meters the deviation would be 6 centimeters.

Beginning at the center, circles and squares are drawn 6 cm. apart, so that when placed at 6 meters each circle and square will represent one prism diopter, and they are numbered accordingly from the center outwards. Meridians are drawn 10 degrees apart, but numbers are re-

versed so as to correspond to the way we see them through the trial frame behind.

A great advantage of such a chart is that once right it is always right and anyone can verify its accuracy by measuring 6 cm. or multiple of it. If not placed at exactly 6 meters, one foot either way would only give a difference of one-third of a degree. So liability to serious error is small.

A prism has to be ground right, marked accurately, placed correctly and retained in that position during manipulation to be correct. A rotation of a 10 diopter prism 6 degrees from the vertical or horizontal would give an error of 1 prism diopter, depending on which way the apex is placed.

Even when all these requirements are exact a rotation of the eye itself (cyclophoria) of 6 degrees would give an error of 1 prism diopter, the kind of error depending on the kind of cyclophoria and where the apex of the prism is placed; all because extra macular fixation is used to compare with macular fixation.

For more detailed description of this see later paper in special journal.

METHOD OF EXAMINATION.

The patient should be placed at exactly 6 m. from the chart, wearing lenses if there is any error of refraction. A trial frame is put on, armed with a dark red glass in one cell, say O. D. The clear eye is covered to give the patient an idea of what the red light looks like. Then it is uncovered and allowed to fix. You then explain, while he is looking at the chart, how the horizontal lines are numbered, 1, 2, 3, etc. Then you ask him whether the red light is above or below, or to the right or left of the white one. If there is no separation, no double vision, there is no latent heterophoria. If there is, the fusion gradually relaxes and the eye takes its position of rest for that test. There is no putting on and off of correcting prisms, which gives rise to oscillation of object and possibility of a snap diagnosis; no depending upon this particular patient's idea of what is straight or about straight. There is no alternation of fixing first with the prism covered eye and then with the clear eye; no uncertainty in the examiner's mind about where to begin with correcting prisms. One patient would call a four-inch separation away over, while another would call the same condition about straight. The confusion that sometimes occurs in the examiner's mind about where to place the base of the correcting prism, or before which eye, is obviated. You ask him where is the red light (red glass over O. D.). Suppose he says it is 3 d. in and 3d. up. (Figure 1 X.) You ask him to confirm this statement

* Made by H. A. Hardy & Co., Chicago, Ill.

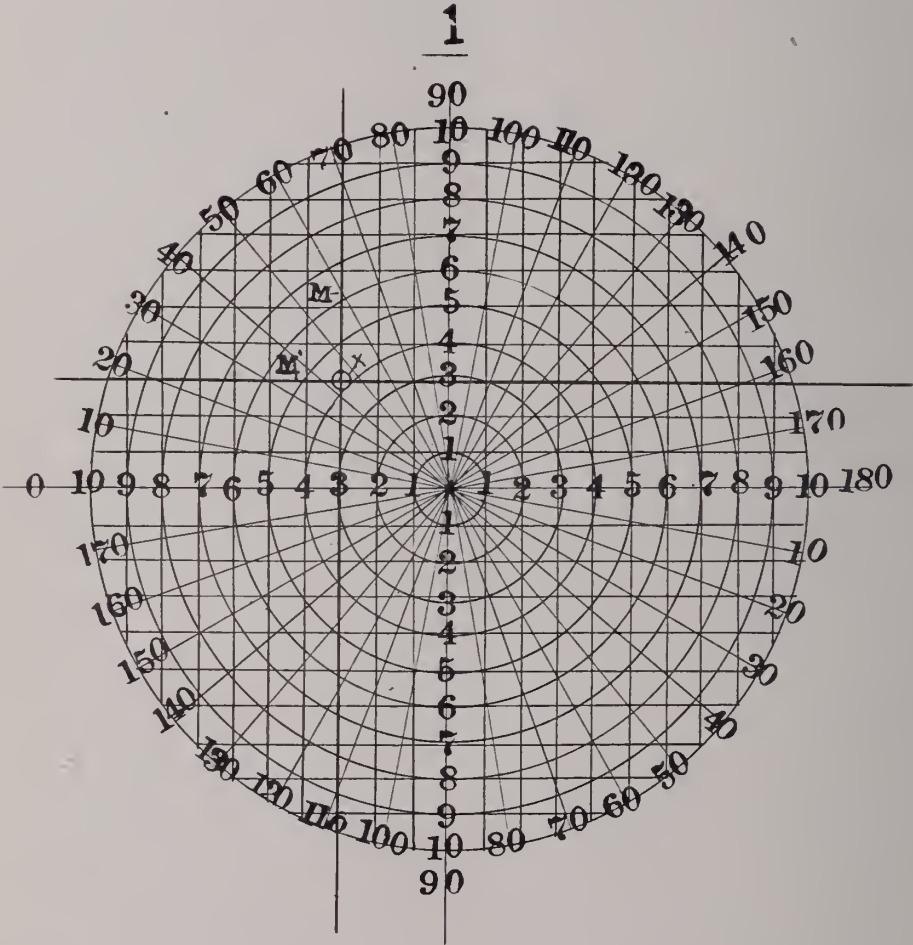
by directing you *where to place your finger on it*. The importance of this objective confirmation of patient's statement with its advantage and satisfaction to the examiner we will not dilate upon. Anyone who has ever placed a prism before a patient's eye for examination can appreciate it without elucidation.

According to our present nomenclature, that would be called exophoria 3-d. with right hypophoria 3-d.—a very ambiguous way to say that

three miles north when you could accurately locate it by saying it is four and a quarter miles northwest?

If patient says the lights are together or that he does not see the red light, put on a 3-d. prism, say base out, and ask him where the red light is. You can quickly determine whether his answers are correct or not. If the lights had been about together he would say that the separation is 3-d.

It was always my erroneous belief when the



the light had gone $4\frac{1}{4}$ d. up, axis 45, the way the chart (Fig. 1-X) expresses it. That is the direction and amount the eye is weak. (Of course the cornea actually turns down and out, axis 45.) That is the direction that base of prisms for rest should be placed, or the position of reversed prisms if that weak direction is to be strengthened by exercise of the muscles. Would it not seem ridiculous if you wish to locate a town to say it is three miles west and

apex of a 10-d. prism up or down or the streak of a Maddox rod vertical was placed before an eye that only the horizontal muscles were being tested, or released, as our text books call it, and that only exophoria or esophoria became manifest. Such is not a fact. The eye under any test which destroys fusion will deviate to its position of rest for that test, and by the most direct route, the shortest distance.

Our present nomenclature does not show it.

To explain: Suppose Maddox rod, streak vertical, before O. D. and it goes into No. 3 (Fig. 1-M)—3 degrees exophoria. Now rotate streak to the horizontal and it goes up to No. 3 M; 3 degrees right hypophoria. The actual point of light never went directly 3-d. in or 3-d. up in such a case, but always goes the hypotenuse of the triangle, which is $4\frac{1}{4}$ degrees up and in, axis 45, as the chart shows it X. That is the direction and extent that the macula traveled.

I have passed around some dark red glasses and by looking at the chart with the red glass before one eye, we can test you while you wait. It does not require the time of the old methods to get unreliable, unworkable answers.

The chart can be used for testing the accuracy of the prisms in trial frame or verifying the corrections of prisms ordered in lenses. It is an excellent means of recording deviations in muscular paralysis for comparisons at subsequent visits. Say with the red light before paralyzed eye and it goes up and in 8-d., axis 60, you have an accurate means of noting improvement in subsequent visits.

By means of this chart you get definite, accurate results without wasting half your morning office hours.

The markings on chart are from 0 to 180, then the same below around to starting point. Therefore it is necessary in recording results to state which eye, whether above or below and at what axis, as O. D. red light, 6-d. up, axis 130, or O. S. red light, 6-d. down, axis 130. It indicates where the base of prism should be placed and before which eye.

I do not feel competent to give any advice about how much of the total latent error found should be ordered for constant use.

I try to get an idea of it by having patient use prism in trial frame before glasses and see how much relief it gives him with various partial corrections.

DISCUSSION.

Dr. William Evans Bruner: This method, as described by the essayist, of examining the eyes to determine the muscle imbalance is very clever. I can imagine also that it may be somewhat more rapid in execution than the test with the Maddox rod and rotary prism. Certainly it gives at once the real deviation of the eye while with the rod this is obtained only by making two measurements, one with the rod in the horizontal and another with it in the vertical position. This shows in one measurement the real direction which the eye traverses to its position of rest, which the rod does not. It may be a little misleading to speak of this faulty position as the latent muscular deviation; it is rather the manifest defect. The latent or total

defect may be revealed only after considerable time, frequently by the aid of prisms correcting the portion already manifest. Of course when we come to treatment of muscular insufficiencies, it is necessary to know much more than simply the deviation either manifest or latent, but this deviation is the first thing to be determined, and in many patients the only test of the muscles we make. In combining prisms with lenses where we wish to correct both a horizontal and a vertical deviation at the same time by a single prism, I can readily see how this instrument might be very useful in determining the axis of the prism.

I should be interested in knowing how the readings as shown by this instrument compare in a considerable number of cases with those given by the Maddox rod and prism. Where the images of the two eyes are so nearly alike, is there a greater tendency on the part of the eyes to fuse them than in the cases with the rod, and consequently is the defect more frequently concealed or is the manifest defect less than with the rod? The doctor is to be congratulated in devising a method which is at once so simple for patient and doctor, and so rapid.

CHOROIDAL ATROPHY IN MYOPIA.

WILLIAM S. KELLER, M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

Much has been said in modern research regarding the association of myopia with choroidal disease, but comparatively little definite knowledge may be acquired of the extraordinarily cautious manner in which myopia as an active etiological factor has been dealt with.

You will pardon me in the course of this paper if, in order to make the subject clear, I touch upon myopia, its causes and varieties. Also to make a casual review of the important histological appearance of the tissues under consideration.

Myopia is that dioptic condition of the eyes in which, with the accommodation at rest, incident parallel rays come to a focus anterior to the light sensitive layer of the retina. Myopia is due theoretically to any of the following conditions:

1. Abnormal length of the eye—"axial myopia."
2. Abnormal curvature of the refracting surfaces.

"CURVATURE MYOPIA."

- (a) Too strong curvation of the cornea.
- (b) Too strong curvation of one or both sides of the lens.
3. Abnormal refractive index of the media—"index myopia."
- (a) Too high index of the cornea or aqueous.
- (b) Too high total index of the lens, due to:
 - (1) Too high index of the nucleus.

- (2) Too low index of the cortex.
 - (3) Both of these causes.
 - (c) Too low index of the vitreous.
 - 4. Abnormal position of the lens, i. e., displacement forward.
 - 5. A combination of the above abnormalities.
- Donders (1866) by ophthalmometric measurements showed that in the majority of cases the cornea of the myopic eye was even flatter than normal, so that the myopia is almost entirely dependent upon a lengthening of the optic axis due to staphyloma posticum.

Donders on clinical grounds divided myopia into:

- (a) Stationary.
- (b) Temporarily progressive, and
- (c) Continuously progressive forms.

Stationary Myopia: Low degree; no tendency to increase.

Temporary Progress Myopia: Gradual increase to 7-9 diopters; ceasing at about puberty.

Continuously Progressive Myopia: Shows no tendency to reach limit until third or fourth decade.

Chief changes in myopic eyes, ophthalmoscopically:

- (1) Myopic crescent or conus.
- (2) Apparent or real change in form of disc—with or without nasal superstructure of retina.
- (3) Changes in and about macula.
- (4) Sharply defined ectasia of posterior pole—true posterior staphyloma—shown by presence of shadow or by course of vessels.
- (5) Weiss' reflex streak.
 - a. Myopic crescent.
 - b. Temporal side of disc.

Supertraction of retina was first described by Jager in 1861. He noticed in a highly myopic eye a faintly pigmented crescent on the nasal side.

It was the writer's pleasure two years ago to be with Prof. Maximilian Salzmann in the laboratory of Prof. E. Fuchs in Vienna, and to examine with him some specimens from which Prof. Salzmann wrote his splendid article on choroidal atrophy, which he read before the Ophthalmological Society at Heidelberg. At this time Prof. Salzmann presented his research on the pathological changes of the choroid in myopia and fixed in a concrete manner the associations of these two conditions.

This article is unlike other literature on this subject inasmuch as it deals with diseased conditions of the choroid primarily, and does not lay the most importance to changes around the optic nerve.

In discussing atrophy of the choroid it is well

to be refreshed of the microscopic appearance of the tissues involved.

The perichoroidal space, or suprachoroidea, lies between the sclera and the choroid, and extends the entire distance of the choroid.

Microscopically, it consists of thin, delicate fibers generally brown with small nuclei; many may unite with each other or break into each other, and in this space one can count six to eight fibers, more numerous toward the sclera.

These membranes consist of an endothelium base to which is applied pigment cells and elastic fibres. Blood vessels and nerve fibres are not seen in this tissue. Large blood vessels pass through this layer and the nerves form a network on the inner layer of the space but do not end here.

This tissue shows certain characteristics of the vascular coat. Branched pigment tissue cells and connective tissue cells may be destroyed in atrophy and show no signs of regeneration.

These cells are the anatomical base of the stroma and cause coloring of the fundus and iris.

The choroid consists of three layers:

- 1. Vascular layer—external.
- 2. Choroidcapillaris—middle.
- 3. Lamina vitrea—internal.

(1) Vascular layer is subdivided and has an outer layer of large blood vessels and inner layer of small blood vessels. Between the blood vessels the same stroma is found as in the perichoroidal space. These blood vessels do not join each other but are only super-imposed.

The choriocapillaris is divided into two layers: Capillary; subcapillary—endothelium.

The capillary layer forms a network of blood vessels between which are supportive fibres. This layer may throw off branches to the medium sized branches external to them.

The external layer of the tissue is lined by endothelium (subcapillary endothelium), with nuclei at intervals.

The lamina vitrea is the most internal layer and is very thin and appears as a narrow band. It is not a homogenous layer, as it does not show equal layers on either side.

This layer is very delicate and characterized by breaking in steps (Sattler). The external surface of this layer consists of a network of elastic fibres and is known as the elastic lamellae. It is darker than the internal and projects down between the capillary blood vessels especially in older people.

The inner layer is entirely homogenous. The highest power does not show the slightest structure. This is known as the cuticular lamellae.

Prof. Salzmann in his splendid article on "Atrophy of the Choroid in Myopia" concludes:

1st. That the process begins in the lamina vitrea.

2d. It is not due to inflammation, for there are defects in the lamina vitrea where there is no blood vessel atrophy.

3d. It is due to mechanical causes, viz: the overstretching of the elastic limit of the lamina vitrea.

Changes at and around the macula in high myopia are common, consisting of yellowish white or pigmented spots, and not infrequently white branched lines, diffuse pigmentation and minute hemorrhages are also found.

The spots coalesce, joining irregular areas which may extend to the disc. These changes are described as myopic choroiditis, although there is no evidence clinical or pathological that inflammation plays any part in the process, and they should be considered atrophic.

Small foci of choroidal atrophy also occur at the periphery in some cases, comprising one form of so-called anterior choroiditis.

The hemorrhages which have been described are probably tufts of dilated choroidal capillaries. They show little or no change during prolonged observation.

A less common change at the macula is the development of a central circular black spot first described by Foster (1862).

The choroidal changes vary directly with the amount of myopia, but are more common in the female sex (Hertel). The stretching of the walls is *not* always uniform and the nasal side may be more stretched than the temporal, as in many cases of high myopia with sharply defined ectasia (Weiss).

Heine considers that the posterior pole is often thinner than is accounted for by mechanical distension, atrophic processes playing a part.

The changes in the posterior pole comprised under the general term "posterior staphyloma," which was used to include the myopic conus (No. 69), are attributed by von Gvarpe to sclerotic-choroiditis, though he subsequently modified his views. Jager and Schweigger pointed out the impossibility of attributing the crescent to inflammatory changes.

Donders agreed with this conclusion but held that the stretching of the coats led to secondary irritative and inflammatory changes, stretching causes stasis in the capillaries of the choriocapillaries. Atrophy follows and gives rise to the atrophic crescent (No. 69).

The condition of the choroid in the grosser changes of myopia is one of stretching and atro-

phy, with little or no evidence of inflammation. Salzmann found defects in the lamina elastica in the affected areas. They appear as clefts, or branching or rectangular figures when reconstructed from serial sections. Near the papilla they are mostly concentric with it; they are attributed to stretching. The tears lead to proliferation of the pigment epithelium and cicatrization, differing in no way from the scarring following choroiditis; hence the great similarity in the ophthalmoscopic appearance. The scars themselves lead to fresh tears owing to their resistance and lack of elasticity, so that the changes are progressive. The chief change in the choroid itself is the disappearance of the lumina of the vessels.

Large vessels are seen but they merely traverse the atrophic areas; the smaller vessels and capillaries fail completely. When the chorio-capillaris remains intact in myopic eyes, it usually contains leucocytes, which are normally absent; this is evidence of the irritative effect of stretching rather than a definite sign of inflammation.

According to Schweigger the chromatophores first lose their pigment then disappear and this is followed by atrophy of the choriocapillaries and consequent degeneration of the pigment epithelium.

Finally the larger vessels become obliterated, and last of all the elastic elements disappear.

(No. 59 and 70.) Atrophy of the choroid is most often seen in the central part of myopic eye.

Atrophy may be due to (1) inflammatory; (2) primary. (No inflammation present in this case.

When you see atrophy complete it is almost impossible to tell the cause.

In atrophy due to stretching of the choroid white lines may represent vessels which have been atrophied. Also atrophy of pigment stromal cells of the choroid. Choroid is reduced to elastic fibres and endothelium.

The atrophic choroid looks thin and unpigmented. Limited number of nuclei with irregular arrangement may be seen.

The lamina vitrea may remain unchanged. Usually clefts in the lamina vitrea correspond to each atrophic spot which is due to stretching.

Pathological changes in the choroid lead to secondary changes in the retina, especially the pigment epithelium, rods and cones, external nuclear and external plexiform layer. We may say that it leads to atrophy of the pigment epithelium and the first neurone.

Pigment epithelium and rods and cones disappear. Instead of the external plexiform and external nuclear layer a reticular structure with a few nuclei appears. The external limiting membrane remain attached to this layer. The

other layers appear unchanged and pass over the atrophic spot.

The atrophy usually ceases with the outer reticular layer; the inner layers of the retina receiving their nutrient supply from the retinal vascular system.

Fusion with the choroid occurs where the lamina elastica is defective, as in disseminated choroiditis.

The atrophic patches occur anywhere in the staphylomatous area, but show a predilection for the circumpapillary zone, where they may fuse with the crescent.

Salzmann holds that the ruptures in Bruch's membrane are spontaneous and primary—i. e., they are not due to atrophy of the chorio-capillaris.

The stretching of the choroid is passive, merely following the bulging of the insufficiently resistant sclerotic.

Ophthalmoscopically one may see white areas due to absence of stroma and pigment epithelium.

Saltzmann thinks that an area in the fundus cannot appear white unless the pigment epithelium is entirely missing and that in acute inflammatory conditions of the fundus, if spot is white, the pigment epithelium must have been destroyed.

Patches are white because the sclera shines through.

(No. 60.) In some cases of advanced myopia there may be breaks in the lamina vitrea allowing the pigment to enter the deeper layers of the choroid and form characteristic cuticula. Pigment may also surround blood vessels.

This pigmentation may be seen in choroiditis and also in primary atrophy. It is always caused by a proliferation of the pigment and never due to the stroma cells of the choroid. Stroma cells of the choroid are involved in the healing process.

This pigmentation may be seen in choroiditis atrophy in myopia, Prof. Salzmann lays stress on the following points:

- (1) Increase in the size of the posterior pole.
- (2) Foramen opticum lamina vitrea shifts toward the apex of the staphyloma posticum.
- (3) The optic nerve canal, internal to the lamina cribrosa is bent toward the staphyloma by the supertraction force.
- (4) The distraction crescent is formed by the exposed bent and broadened scleral ring on the same side as the staphyloma.
- (5) The supertraction crescent is formed by the side of the disc opposite the staphyloma.

There are two theories as to the cause of post-staphyloma:

- (1) Proliferation in the sclera. (Heine.)

- (2) Effect of intraocular pressure on a congenitally weak sclera.

(Prof. Salzmann does not espouse either of these theories.)

The sclera of the posterior pole is much thinned even in low degrees of myopia.

The crescent building is a necessary and beneficial effect of the posterior staphyloma, as without it. There would be more tearing from greater tension.

As noted by von Graefe the region about the point of entrance of the posterior ciliary vessels is a favorite seat of choroidal atrophy; at these points the choroid is more firmly attached to the underlying sclera than at others except at the disc.

Inflammatory changes play an unimportant part in the atrophy.

In some cases atrophy may come long after the disease has become stationary. This we explain as follows:

- (1) The tears in the lamina vitrea may precede the ophthalmoscopic appearance atrophy.

- (2) The lamina vitrea may increase in brittleness with age.

The determining factor in the occurrence of choroidal atrophy in myopia is the relation between the tension and elasticity of the choroid. The tension on one hand may be increased, or, on the other hand, the resistance may be decreased, or both of these factors may be combined to produce the result. Statistics show a marked increase in the per cent of cases with macular disease when the myopia is more than 8 O. D.

This gives quite a definite criterion of the amount of change in the length of the eyeball that may occur without tearing of the lamina vitrea of the choroid and atrophy to follow.

Remedies.—(1) Stop near work.

- (2) Phakolyse. The writer voices the sentiments of Prof. Salzmann and other authors by accepting the uniformly observed improvement in the vision after removal of the lens, by assuming that it lowers the tension on the stretched lamina vitrea and stops tearing and the possible inflammation that is attending it.

Therefore it is quite possible that the presence of choroidal atrophy is not a contraindication for the operation. Yet we must make it clear that the operation is not an advisable procedure for the cure of choroiditis from myopia unless the optical indications are also present.

DISCUSSION,

Dr. Stuart: Mr. Chairman and Gentlemen of the Section—We are much indebted to Dr. Keller for presenting to us such a good picture of what

occurs in myopia and giving us an accurate description of the atrophy of the choroid and its various stages of progress.

I think it is quite natural to suppose that the inner layers of the retina are nourished mostly from the arteria centralis retina and that the outer layers of the retina, those which lie in contact with the choroid being nourished by the choroidal circulation must receive a great deal of irritation and suffer a disturbance of nutrition whenever the choroid itself is the seat of irritation and disease. It has been demonstrated that fields of vision taken in cases which involve the inner retinal layers, where there had been hemorrhages will not show changes in the fields, whereas, there can be obtained in most all cases positive scotomata where the outer retinal layers are involved; thus proving the destructive action of choroidal changes.

There have been, as Dr. Keller has said, several theories advanced as to the causation of posterior staphyloma. I have been interested in reading the writings of Schnabel in regard to his belief in regard to this. This is what he says:

"Posterior staphyloma occurs almost exclusively in eyes presenting defective development of the choroid and an anomalous form of the optic nerve due to it. There is also a malformation of the retina (loss of the outer elastic layers) near the optic nerve.

"Congenital anomalies in the development of the choroid and sclera are the constant and essential features of eyes with posterior staphyloma.

"Posterior staphyloma is a malformation and not a consequence of disease; it cannot be acquired by eyes with normal membranes."

I have also been interested in a recent article by Dr. Hansell on some of the lesions in myopia. He speaks of three things which he considers as having had little attention paid to them by ophthalmologists. One is the slow vision of a myope, and the second is the excessive illumination that it demands. It seems to me as I think of it, that this is probably due to irritated changes in the retina, which are probably due to changes in the choroid. The third is the early exhaustion of the seeing power of the eye. His conclusions in regard to treatment are along the same lines as those of Dr. Keller.

To me it has been of interest to have seen of late a notice of some southern man in regard to the conditions among the negroes. The negroes have large eyes, but I have seen very little myopia among them. Lately I have observed in my clinic a negro who had a myopia of about seven or eight diopters with a bent nerve toward the nasal side, and in that same individual in the other eye a myopia of between ten and twelve diopters, and in that eye showing choroidal atrophy.

Dr. Clark: As a myope and one whose life has been seriously modified by wrong theories held on the subject of myopia, I want to say a word. Twenty or thirty years ago the profession held some extreme theories, based on German ideas, as to the progression of myopia and a great many people were the unfortunate victims of these beliefs. A prominent oculist took me out of college at the end of my sophomore year. At the end of twelve months he told me I must remain out a second year and when this second year had

come to an end I appealed to Dr. Williams, of Cincinnati, who allowed me to continue my studies. My first advisor had the idea that I had progressive myopia. He was influenced by German theories on the subject which prevailed at that time. I have been practicing for many years among college students and I do not think I have seen a half dozen cases whom I found it necessary to take out of school. In every case of myopia if we do what we can to correct the mode of life of the patient and properly correct the refraction error we can generally hold the myopia in check. We can rely with confidence on the teachings of Saltzmann on this subject and the cases that are actively progressive are often found to have some congenital error. I think the ordinary case can generally be checked by properly adjusting glasses and the correction of defective conditions in the life of the patient.

Dr. Vail: I should like to say a complimentary word regarding the beautiful drawings the essayist has shown us. They are well executed and are valuable and instructive. It is unfortunate that we have not had time to give these drawings the careful attention they deserve.

The pathology of the choroid in myopia probably finally simmers down to the natural results of mechanical changes within the elongated eye. Given the fact that the eye has increased greatly in depth, and you can infer what would happen to the choroid. No doubt the choroid becomes atrophied as the result of the increased stretching within the eye. When the optical axis of the eye increases enormously, something has to give way; naturally the first thing to suffer in the strain is the choroid. Sometimes the eye ball becomes acutely and rapidly enlarged; this constitutes the rapidly progressive myopia often observed in young adults. This becomes a very important matter, because we know that increasing myopia will sooner or later develop into myopic choroiditis and consequent damage to the sight. If we could locate the cause of myopia, we would be able to prevent the results and arrest the progression. It is self-evident that the attributed causes of myopia are not the true causes; increased use and abuse of the eyes at close range cannot be the cause, for millions of children use their eyes and strain them in the same way the myope does. Why does a small per cent of them develop myopia, while the rest remain hypermetropes or emmetropes?

My own idea is, and it is purely theoretical, that there is an acute defect in the lymph drainage of the vitreous chamber. For some reason or other the outflow of lymph from the vitreous chamber becomes impeded and as a consequence there is an increase of intra-ocular contents. The sclera, being elastic, gives way from the increased pressure. There is no appreciable increase of tension because of the elasticity of the sclera. The choroid cannot stretch like the sclera and so there are rents and tears and atrophic changes of the choroid.

The question of the removal of the crystalline lens in high myopia is a very important one. Fucala's operation is being abandoned by the best ophthalmologists on account of the recent statistics showing the disastrous results of the removal of the lens in myopia in eyes months after the lens has been removed. If you will read the re-

cent reviews of such statistics in Knapp's "Archives of Ophthalmology," May, 1910, you will see the report of the work of two eminent oculists of the eastern hemisphere, each of whom removed sixty lens for high myopia. In each series there were eleven of the sixty cases which developed detachment of the retina following the removal of the crystalline lens; moreover, a certain per cent of the remainder became blind from other causes, so that the application of this method of dealing with the ocular conditions in myopia is certainly far from being encouraging.

Dr. Brown: I wish to thank Dr. Keller for the drawings that he has presented the section, and to express my interest in the subject of his paper. A few years ago I did some three of these operations in high myopia, and, so far as I know, there has been no detachment of any of these cases. Last year I took the opportunity of making some inquiries in regard to this operation at the Vienna clinic, and was told that they have had this operation under observation for a number of years and watched the results in the many cases in which the extraction of the lens had been made, and that they are now able to say that the cases operated show a greater proportion of detachment of the retina than the unoperated cases. They have practically given up this operation and state that there are less than ten cases per annum in that large clinic in which they would think of extracting the lens for any condition other than cataract.

ADDRESS OF CHAIRMAN EYE, EAR, NOSE AND THROAT SECTION.

D. W. GREENE, M. D.,
Dayton.

[Read before the Ohio State Medical Association.]

It will be difficult for me to condense what I could say to you, in a few minutes talk, on "A Resume of My Experiences in India," the subject is so large. Fortunately we have with us two gentlemen who made the trip at the same time I did, and the third, Dr. Sattler, has made a respectable number of operations and has made all arrangements to go to India this fall. These gentlemen are each down for a paper on the Smith operation, which they will treat from different points of view, so that the subject will be well covered, and I can assure you they will tell you the truth, the whole truth and nothing but the truth concerning the operation, so far as they have seen and know it; therefore I shall have little if anything to say concerning the details of the operation, but can, I feel, prepare your minds for the papers which are to follow, by some general remarks on India and its people, supplemented by several lantern slides later on.

India, as you know, is more than a country, it can well be considered a continent about one-

third as large as the United States, and contains in round numbers more than three times as many people. Originally the inhabitants were pure Hindus, and with all of the invasion from the West, especially that of Mohammedan in the Eleventh century, few changes in the people have been observed. Oriental people do not change much in manner or costumes, nor in racial characteristics. They are as immutable apparently as the eternal hills. Custom and tradition are the sum total of their knowledge, and count for everything with them. They respect these more, even than the law of the land. Caste is the greatest curse in India today; it stifles ambition and dwarfs intelligence. Every son must, by an inexorable, unwritten law follow the avocation of his father. If he was a beggar, they must be beggars. If a barrister, they must be barristers, etc., through all the avocations of life. It would not be fair to say that the average Indian is intellectually stupid; on the contrary they are bright and quick to learn whatever they can immitate, but thrown on their own resources, their immature minds leave them helpless without resources.

The southern half of India or more is well within the torrid zone and the northern portion south of the foothills of the mountains might as well be, for excessive heat of a section of country is not always determined by its geographical location. The 30th parallel of latitude passes through the Punjab, and not far from Jullundur, New Orleans is on the same parallel, but the climatic conditions are entirely different, so that there must be other causes for the extreme heat of India, than its location on the map. I was told that a temperature of 160 in the shade in the height of the hot season was not uncommon. By the middle of August or first of September the heat begins to shade off gradually, and about October 15 a rain is due, after which the weather cools down and the temperature does not go high again.

During the winter season—December, January and February—the days are delightful, but the nights are very cool, even cold. A peculiarity of the climate, is that while Jullundur is only 900 feet above the sea level, and is thirty miles from the first foothills of the mountains, the after part of the night is seldom too hot to sleep under cover, even during the months when the days are extremely hot. Major Smith slept out of doors until November 1, but a heavy dew which falls about 4 o'clock always drove him indoors and to blankets. While on the subject of the climate it may be profitable to call attention to the influence which sunlight rich in actinic ultra violet rays,

may have on the eyes of an agricultural people, who wear no protecting shade for their eyes, and who are exposed to its pitiless direct rays from above, and the reflected rays from the white sand of the earth below during the day, may have in causing the great prevalence of cataract in this part of India. It is true they have dark skins and black or brown irides and thus have all the protection nature can give them against these baneful influences.

We know that a certain class of bottle-makers who are compelled to look into the bright glare of furnaces are subject to cortical cataract. We are also told that cataract has been produced artificially in animals by exposing their eyes to various kinds of light, rich in actinic rays. Analogy suggests that the great heat and glare of the sunlight and the underfed condition of the inhabitants of the Sind, might account for the great prevalence of cataract among them, but, on the other hand, there are other countries inhabited by dark races, probably from the same parent stock, where cataract is not so common as in India, especially in the Punjab, yet they too are generally underfed. They wear the same headdress, and are exposed to about the same rays of the sun. These observations might lead one to question the influence these may have in the causation of cataract. I think, however, that conditions in India are somewhat different from those which obtain in other hot countries. Speaking for the Punjab, the people are largely agriculturists, and I would say are not lazy and indolent as most people inhabiting hot countries are, especially those living in cities and villages, but men and women will work all day long in the field, and after the day is done, will travel several miles, perhaps, to their native village. These Indians do not live in habitations scattered over the country, as we are accustomed to see, but are gregarious, living in villages and towns, many of the farmers thus have to travel miles to their field and back again at night, so that their day of labor is a long one, fourteen to sixteen hours, because an ox team travels very slowly.

Major Smith has told me that an average of 160 operations for stone in the bladder have been made at Jullundur Hospital for several years past. He insists that there must be some common cause operating to associate the two conditions, because wherever in India cataracts are abundant, cases of stone are also frequently seen. I do not know the composition of these Indian stones, but the report of Berge of Johns Hopkins

University, "Archives Ophthalmology, September, 1909" shows that the Indian catarachus lenses contains 3.63 of silicon as against none in the American lenses which I furnished him.

The hot and cold months already referred to are what make the cataract season.

The people come from long distances. I have seen them from Calcutta, Bombay and Madras, and from all parts of India in fact. Some come by rail (third class travel is very cheap, more people travel by rail than with us), some ride or are drawn by camels, others are brought in carts drawn by bullocks, some are brought in push carts, and more than a majority I think walk, and camp by the roadside when night overtakes them. With the advent of the hot season, work begins in the fields, and no one can be spared to come with a patient to the hospital. When the late harvest is over and cold weather comes, it is then too cold to sleep by the roadside and attendance drops or, so there will be two operating seasons at Amritur, where Smith now lives. This city is only fifty miles from Jullundur and has about 300,000 people, and is near the center of the cataract field. It is not likely that the number of operations will diminish because the population is increasing, and the people believe in it, and this is one of the strongest arguments in its favor. The method having been found especially suited to the treatment of incipient and immature cataracts, its scope has been enlarged more than fivefold, I should say.

The Smith operation offers the best and safest means of extracting such cataracts, when they have advanced so far that useful vision no longer exists. My limit is 20/200. It is not intended to even imply that the operation in such cases may not have its own complications, on the contrary it has, but they are seldom of the inflammatory type, which renders the regular combined operation so unsuited for the treatment of such cataracts.

An intractable tuberculous cystitis that is not improved by silver nitrate most probably is associated with tuberculosis of the kidney, which causes reinfection.—S. S.

The filiform bougie is not used to good advantage if employed after the passage of a sound or large instrument, as splits of the mucous membrane are produced into which the filiform finds its way. It should be the first instrument employed.—S. S.

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THE OWENS BILL FOR ESTABLISHING A NATIONAL DEPARTMENT OF HEALTH.

This is a subject that has been considered several times in these columns; the bill itself was printed in a former number of THE JOURNAL, together with the speech of Senator Owen, its sponsor, and repeatedly the aims and advantages of the measure have been discussed. There still appears to be, however, a widespread lack of comprehension of its true intent and scope, and a certain amount of misunderstanding which seems to have been intentionally caused by interested parties. We have before us a pamphlet by B. O. Flower, the head of the "National League for Medical Freedom," entitled the "Menace of a National Health Board"; this effusion is one of a series of similar character, and is craftily worded to snare the unwary. These have been sent broad cast and while varying in minor points, all unite in the intimation that a National Department of Health would be a menace to the freedom of the citizens of our country. In point of fact, if a National Department of Health were established, the ordinary citizen, physician or layman, would

not be personally aware of any extraordinary change. Even the quack would not be interfered with as long as his wares were anywhere near honest or pure. The Christian Scientist would not be disturbed—in fact individual or local affairs would not be affected in the slightest. The practical results aimed at in the bill are the collection of the various health agencies now scattered through various departments and bureaus into one agency, so that what is now already being done in a disconnected way, may be better and more thoroughly carried out. The present situation is typified and illustrated by the situation of the Marine Hospital Corps, an excellent and, considering all things, efficient institution, but it is an under section of the treasury department—health subservient to the dollar mark! And that is true throughout. One of the main arguments of this prolific writer, Flower, is the expense, the great *expense* of such a new department. The economic value of health is a difficult matter to demonstrate so that all can understand it. To us, however, there should be no such difficulty; we see too frequently the most graphic illustrations.

The secret of the opposition is in the

jealousy of the non-medical interests and the uneasy consciences of the quacks and charlatans. The two last named fear they know not what; there is nothing in the bill which specifies regulation of their evil doings, but they dread any change which might eventually lead to their exposure and interfere with their at present, gigantic graft.

The non-medical interests are simply and frankly jealous for fear that the bill may add to the good fame of the regular medical profession, and to prevent that are fighting with every weapon at their command. Remember that the bill simply aims at the unification of the already existing health agencies under one independent department, so that each may work in harmony along definite lines; that only health questions of general federal interest will be affected; that broad health measures, interstate as well as international, demand some such regulation; that there is no possibility or intent of infringing upon the individual rights, and lastly, when one speaks of the cost, money spent in furtherance of health and prevention of disease is money well spent, and in reality, money *saved* in the long run.

"606"

We print in full in this number of THE JOURNAL the abstract contained in the Berlin letter of the A. M. A. of Professor Ehrlich's address before the Naturforscher Congress, recently held at Königsberg, for the reason that it contains in brief practically all of the facts to date on this most remarkable preparation. Medical journals have been filled with discussion of the subject for some months; eulogies and adverse criticisms have appeared on all sides, with, however, the former greatly overbalancing the latter. Doubtless in the next year we will hear still more as opportunities develop for the personal observation in this country of the action of the substance. Hitherto we

as potent as quinine in malaria. In fact, the latter drug is the only one at all comparable to it, and doubtless its introduction aroused proportionately just as much of a commotion in medical circles of those days as Ehrlich's discovery has this year. Its action was almost miraculous, and in improper cases, patients with idiosyncrasies, or in improper dosage its results have often been as bad as any reported of "606." Time has demonstrated its true worth, however, and malaria, formerly an ever present malady, has almost disappeared. Time must therefore elapse until we shall know the truth of this new wonder—and it may be—God grant it—that syphilis that scourge of modern civilization will be banished from our midst. In the meantime have had to content ourselves almost entirely with the foreign reports; these seem almost too remarkable to be true, but are vouched for on excellent authority. The reports of its use in 10,000 cases have now been collected and speak in no uncertain terms. Restricted to the selected cases as advised by Ehrlich, "606" appears as harmless as he claims it to be, and in effectiveness quite we must preserve an open mind, watch the results of others and wait as patiently as we may until we have the opportunity to observe for ourselves, and eventually the testing on a universal scale, will give data from which general deductions and accurate conclusions may safely be drawn.

A psoas abscess occasionally points in the outer part of the groin (i. e., close to the anterior spine of the ilium). When there is no evident spinal deformity to suggest the diagnosis the swelling is apt to be mistaken for a growth.

Chronic ulcers of the face situated in the area between lines drawn from the outer end of the eyebrow and the upper border of the ear above, and the angle of the mouth and the lobe of the ear below, are usually epitheliomata of the basocelled variety and they are comparatively non-malignant.

EDITORIAL NOTES

The following statement was received October 26, which we take pleasure in presenting to our readers:

"The physicians of Marion are desirous of speaking a word as to the relations of Hon. Warren G. Harding with the medical profession. Having known him for many years we feel able to speak confidently and authoritatively on these points. Mr. Harding is the son of a physician and as his brother is now following the same profession, he is therefore well acquainted with the aims and motives of physicians of the day. He has ever shown himself favorably inclined to and sympathetic with all progressive measures advocated by our profession. We cannot ask of any legislator or governor any more than a fair and just consideration of any arguments we may present for or against proposed legislation. We can confidently and sincerely assure our fellow members that in all things and upon all occasions Mr. Harding will treat with courtesy any representatives of our association, and weigh with the utmost care their arguments and in every way consistent with with his conception of right and duty, he will further their wishes."

 EHRLICH ON HIS "606."

At the eighty-second session of German scientists and physicians, the Naturforscher Congress, just held at Königsberg, one meeting was devoted to the discussion of Ehrlich's new remedy and he made the following statements with reference to "606."

The specific action of the remedy was recognized in animal experiments and is shown especially by the fact that on the application of a sufficient dose the spirochetes disappear in from 24 to 48 hours. If the time required is longer, either the dose was too small or the spirochetes in question are immune to arsenic. The second fact which has developed is that specific antibodies are produced. It appears that treatment with "606" furnishes an unusually favorable opportunity for the demonstration of these antibodies. The first important observation was that the milk of a mother who was nursing a syphilitic child and was herself treated and cured with "606," had a remarkable favorable action of the child. A similar result has been noticed in a large number of nursing women. The arsenic content of the

milk is extraordinarily small, so that it is evident that the milk must contain antibodies which are received into the stomach of the child and absorbed. From other sources it is known that if the serum of such patients is injected into syphilitic children the symptoms of the disease disappear. While it is evident that specific antibodies are formed, Ehrlich is of the opinion that the serum treatment alone is not sufficient for a positive cure. For if of a thousand spirochetes only a few survive, they are sufficient to prevent a complete cure. If children are injected with serum an extraordinarily prompt curative action is observed at first; the exanthemata very promptly disappear. But after six or seven days other disturbances develop testifying that the antibodies were insufficient to destroy all the spirilla. It is therefore best to give such a child, soon after, a sufficient injection of "606" to kill the rest of the spirochetes.

The second specific is on the Wassermann reaction which is certainly connected with the presence and growth of the spirilla. The very interesting observation has been made, that in certain affections a negative Wassermann reaction becomes at first positive under the influence of the injections. For instance, in chancres at an early period, the number of spirochetes is so small that they are not capable of producing a positive reaction. If now the previously negative reaction is at once converted into a positive one, evidence is furnished for the actual syphilitic nature of the disease. The importance of this reaction in the treatment with "606" cannot be sufficiently emphasized, he declared. If by the therapeutic action, only 100 out of 1,000,000 spirochetes survive, no reaction will occur, but every positive reaction is to be regarded as analogous to a relapse and is therefore an indication for the repetition of the treatment with "606." Such cases should be examined at sufficient intervals and kept under observation. It would be very desirable if a modification of the Wassermann reaction could be made so that the practitioner could apply this important test to his patients.

A third action which is very hard to explain consists in the fact that the remedy often works with wonderful rapidity. The statement has been made from many sources that patients, for instance, who had not been able for months to swallow any solid food on account of disease of the fauces or tonsils could do so immediately after an injection. This remarkable rapidity of action is not to be explained by anatomic changes but depends on the removal of the pain, which was due to the action of the products of the secretion of

the spirochetes; "606" acts in this case as an anti-neuralgic. On the other hand, it has been occasionally observed that increased sensitiveness occurs in some patients similar to what has been observed after mercurial injections. The first observations in this line come from Italy where extraordinary caution was at first used and doses of from 0.025 to 0.05 gm. ($\frac{1}{2}$ to 1 grain) were employed. The spirochetes recovered themselves after a short time; they were not destroyed by the weak remedy but stimulated so that the result was a greater secretion of toxin. Ehrlich has always regarded the remedy as an arsenical and a dangerous remedy and has therefore insisted on the necessity of a thorough preliminary testing of it. No one can expect complete harmlessness in a remedy which is to kill parasites. The mortality as a result of the remedy depends exclusively on the constitution of the patient, a law which holds for all dangerous remedies, even for chloroform. Ehrlich now reports of the use of "606" in 10,000 cases. The results have shown that "606" is not especially dangerous. In this large number of cases there is only one in which death immediately followed the administration of the remedy, and this was the case of a female patient whose disease, tertiary syphilis, must have eventually resulted. In this case the injection was made with the acid solution and there was a certain shock which would be avoided with the newer preparation. All other fatalities, of which the number might reach a dozen, occurred in cases of severe nervous disease, tabes and the like, in which the prognosis at least was very doubtful.* If in such desperate cases unfavorable results ensue, it must not be said that the remedy is dangerous. Such extremely dangerous experiments must be undertaken if one has the convictions that he can save the patients in that way. Ehrlich does not consider the remedy indicated in cases of severe paralysis, for even if a cure resulted the patients could not be expected to become useful members of human society. A second contraindication is furnished by diseases of the heart and blood vessels in which one must be very cautious. As to the technic, the alkaline solution which was first introduced by Alt and Iversen has the slight disadvantage of being somewhat painful while the neutral injection has the advantage of lessened painfulness. For that reason the neutral emulsion should be preferred in neurasthenic and alcoholic persons and in patients sensitive to pain. Probably in future combination of both methods with the use of both intravenous and subcutaneous injections may be adopted. The dose depends on the nature of the disease. A general dosage can-

not be given. In nervous affections 0.4 gm. (6 grains) should not be exceeded for these oversensitive individuals react very unpleasantly on the part of the heart and central nervous system. Moreover in these central nervous affections the number of spirochetes is very small and a smaller amount of the remedy is probably sufficient for their destruction. It has been established that from 16 to 20 per cent of the paralytics have lost their Wassermann reaction. These patients have not regained the reaction in a period of two years and this fact gives a most hopeful outlook for the future. In general Ehrlich agrees with Neisser that one should try to give doses large enough to secure a cure by the first injection. In a relatively healthy person a dose as high as 0.8 to 1.0 gm. (12 to 15 grains) or even higher can be given without danger. Finally Ehrlich notes that the remedy is also active in other diseases. Among these the most prominent is frambesia which is very nearly related to syphilis, next chicken cholera and certain forms of malaria. The fact has been independently established from various sources that a single subcutaneous dose was sufficient for the removal of fever in malaria. Also in two small-pox cases the remedy had an apparently favorable effect.

CORRESPONDENCE

Editor Ohio State Medical Journal, Columbus, O.:

Dear Sir—Doubtless you have long ago formed your opinion as to the merits of Esperanto, the international language. I hope that it is favorable; but as there is much irresponsible criticism of Esperanto, especially on occasion of the recent international convention in Washington, I want to offer an opportunity for every thinker to judge for himself. I have had prepared 100,000 brief grammars of the language in pamphlet form and will send one free to any person who is sufficiently interested to ask for it, enclosing stamp for reply. I think it really due to this great movement for an international auxiliary language, which now embraces *fifty nations* in its scope; that you publish this letter, so that your readers may have the opportunity of judging for themselves.

ARTHUR BAKER,
Editor Amerika Esperantisto.
700 E. 40th St., Chicago.

A uniform enlargement of one buttock, developing spontaneously and not of subcutaneous origin, is probably due to a subgluteal lipoma. Here, too, however, a hydroma must be thought of.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.

LOUIS A. LEVISON, M. D., Toledo.

ENTEROANASTOMOSIS ABOVE INCARCERATED HERNIA.

Hesse (*Zentralblatt für Chirurgie*, Leipzig, Aug. 6, 1910,) advises that the enteroanastomosis be made without attempting to reduce the incarcerated loop. Through an incision over an inch above Poupart's ligament a lateral anastomosis is made far enough up on the bowel as not to pull on the incarcerated bowel during the manipulation. The mesentery is then fastened to the region below and the abdomen closed. "The gangrenous hernia and surrounding inflammation are then taken care of through an opening below, but Hesse advises not to attempt to reduce the incarceration nor pull on the bowel in any way. By this method it is possible to re-establish the permeability of the intestinal canal, and open up the focus while yet protecting the abdomen above from contamination, and all with the simplest and least exacting technic, deferring the resection of the gangrenous loop to a more propitious hour, when the patient has regained strength, the wound is in better condition or the light better. The objections to the method are that the lateral anastomosis has to be made against the peristalsis and the liability to a persisting fistula at the hernial opening. It should be reserved for cases in which every minute counts or the patient is too weak to stand a more extensive operation. Hesse gives the details of two cases in which he has successfully applied this technic. Both patients were women, 43 and 53 years old."—J. A. M. A.

INGUINAL HERNIA UNDER COCAINE ANESTHESIA.

That operations for inguinal hernia can be satisfactorily done under local analgesia is well recognized. There are cases where general anesthesia is counterindicated (unless the patient and physician are so situated as to take advantage of nitrous oxide anesthesia) and there are patients who will refuse any operation if they have to take a general anesthesia. For such as these cocaine (or preferably eucaine, which can be sterilized by boiling) makes the operation acceptable. The patient should always receive a hypodermic of $\frac{3}{4}$ gr. morphine at least one-half hour before the operation is to begin. Exact anatomical knowledge and a clean, bloodless dissection are essential to success with this method. DeWitt (*Southern Med. Jour.*, Aug., 1910,) sums up the

points in favor of local cocaine anesthesia in inguinal hernia thus:

"1. Many patients are induced to submit to a cure who would not do so with general narcosis, and the anesthesia mortality is removed.

"2. The integrity of the nerves is maintained, thus preventing muscle atrophy.

"3. There is no vomiting, thus relieving strains on sutures and allowing early administration of food.

"4. The danger of ether pneumonia is removed, and there is much less liability to renal insufficiency.

"5. Every step in the operation is done with cocaine that is carried out with general narcosis."

A SIMPLE METHOD OF REMOVING SEBACEOUS CYSTS.

Of the minor surgical procedures the removal of a sebaceous cyst is one of the most simple and one most frequently improperly done. The cyst should be removed in its entirety and not simply incised. Further, in removing it the most common error is to incise directly over the top of the cyst. This almost always results in opening into the cyst, loss of relations, and incomplete removal, which means subsequent return of the cyst. Freeth (*The Lancet*, Aug. 20, 1910,) describes the method which he finds satisfactory. The method is not new but is good, except that many prefer to make a clean dissection with a sharp knife rather than to use a blunt hook as he does. "An incision is made, not over the cyst, but through healthy skin alongside it, parallel to and the same length as the shortest diameter of the cyst. The injection of a little eucain solution along the line of the incision is all the anesthetic required. A small, blunt hook is then inserted into the incision and is worked around the cyst, tearing through the adhesions of the cyst wall, first on the superficial aspect, as that is where the cyst wall is the thinnest, and then on the deeper aspect, until the cyst is completely separated, when it can be delivered by pressure from above. A little collodion on the wound is all the dressing required. The advantages of this method are that the incision is through healthy skin, and where the cyst is oblong is shorter than the usual incision. Consequently, the union is quicker and more satisfactory and the appearance of the resulting scar bet-

ter than when the incision is made through the altered skin over the cyst. A minimum amount of anesthetic is used, and in case the cyst is situated on the scalp very much less hair need be cut. The largest cyst that Dr. Freeth has removed in this way is about the size of a bantam's egg, but he would employ the same method in removing a very much larger one."—*Med. Record*.

SIMPLE BURSTITIS.

Binnie (*Jour. Missouri State Med. Assoc.*, Sept., 1910, p. 71) shows the ease with which bursitis can be overlooked by not having it in mind and looking for it. He says:

"Students of medicine spend much time in the study of anatomy. They learn, and generally promptly forget, the origin and insertion of all the muscles; the course and branches of the principal arteries and nerves; the principal bones, and something about the principal joints. It is, of course, essential to know much about the structures named, but it is unfortunate that time does not seem to permit any detailed study of the lymphatics, which are, from the standpoint of operative surgery, of more importance than any but the greatest arteries. In removing a cancer it matters little how many arteries (with two or three exceptions) we divide; it matters greatly how thoroughly we dissect away the lymphatics which drain the diseased area. Similarly, time does not permit the students to realize that any bursæ exist except the patellar and perhaps one or two more. Never having had any knowledge of bursæ ground into him in his student days, the practitioner forgets to take bursitis into consideration when hunting for the cause of some obscure lameness and disability, and so is liable to do his patient and himself grievous injustice. Bursitis in some localities is so obvious and so well known to the laity that error is practically impossible, e. g., in the case of housemaid's knee. The object of the present paper is to draw attention to some of the obscurer cases of bursitis where error in diagnosis is common and important.

"Bursæ are clefts or pouches in the tissues; are lined by a smooth, fibrous tissue membrane, with or without endothelium; contain a small quantity of synovial-like fluid, and act as a sort of pad or fender between various structures. They are exceedingly numerous and may be congenital or acquired."

* * * * *

"Congenital bursæ are provided, like joints, with an epithelial, or, better, an endothelial lining. Bursæ, whether congenital or acquired, are very subject to inflammation, both traumatic, i. e., non-

infected and infected. It is with the non-infected—traumatic or simple bursitis—that we are dealing in this paper.

"As a result of one or several injuries the tissues immediately around the bursal cavity and forming its walls become inflamed. There is a great effusion into the bursal sac, which becomes much distended as a consequence. If the bursa is superficial the skin over it becomes stretched and red. Pain is a marked feature and, according to the location of the bursa, disability is most noticeable."

Binnie then cites the case of an athlete who after repeated traumata developed a bursitis over the tendo achilles which made it impossible for him to get about. In this case the treatment was to put the foot at rest in the equinus position. A bursitis here is very prone to recur because of the exposure to injury. Traumata to the knee may result in a bursitis of the large bursa under the semimembranosus. This is evidenced by a tenderness to the inner side of the knee and the presence of an elastic swelling extending into the popliteal space. Usually rest will result in complete recovery. This can be obtained by heightening the heel of the shoe about three-fourths of an inch and so preventing full extension of the knee. Still another bursa is that under the deltoid muscle the injury of which is so common in baseball players and results in the so-called "glass-arm." Injury to this bursa usually is the result of direct trauma to the shoulder by falling on the point of it. Codman has studied this particular bursa and his paper on the subject was published in this journal (*Vol. II, No. 2, Aug., 1906, p. 55.*) The last case cited by Binnie was that of a chronic bursitis over the great trochanter, which had caused disability since 18, and had been diagnosed as an exostosis. Excision of the bursa resulted in a complete cure. In conclusion he says:

"Chronic bursitis may recover when rest is given, but usually more active treatment is necessary. Excision is the treatment of choice in chronic bursitis; it not only gives the best prospect of a permanent cure of the simple, non-infective variety of the disease, but if the lesion is due to tuberculosis or such like infection it also is the best possible method of treatment."

LOUIS A. LEV SON, M. D.

THE WASSERMANN SERUM REACTION IN GENERAL MEDICINE.

Matson (*American Journal of Dermatology and Genito-Urinary Diseases*) comes to the following conclusions based on 2667 reactions:

A positive reaction is a symptom of syphilitic

infection, which has taken place and is still present in an active or latent form, irrespective of clinical manifestations. It may mean changes in the internal organs without recognizable external signs or symptoms, but teaches that there should be an exhibition of anti-syphilitic treatment.

A persistent positive reaction in spite of vigorous treatment does not necessarily give a bad prognosis, although if no visible signs are present we may expect visceral lesions or parasyphilis.

A partial reaction should be taken as negative, if found in an untreated case with no manifestations or history of infection; but positive if history of infection or manifestations are present and mercury has been taken within the previous month.

A negative reaction has many values. If found in the first few weeks of suspected primary sore, it is meaningless. If found after three or four weeks and suspected manifestations are present, but energetic treatment has been given, it is almost positive evidence against syphilis, but should be repeated.

A negative reaction in any case while mercurials are being taken is of questionable value. One month at least should elapse after leaving off mercury before a negative reaction is significant and then it certainly gives a more favorable prognosis in a specified case, if after a number of courses it becomes and remains absent. We must agree with Butler that one should not leave off anti-syphilitic treatment with the disappearance of the reaction for in a few cases it reappears sooner or later.

Finally, it must be remembered that conclusions based on the new reaction are only in the process of growth and will require observation over a number of years to assume a definite form. However, enough has already been shown that modern hospitals should be equipped to make the test on every patient entering.

TREATMENT OF GENITAL GONORRHEA IN WOMEN.

Talmage (Merck's Archives) states that the vulva should be thoroughly cleansed twice daily with tincture of green soap and warm water. The vulva should then be dried and all the crevices dusted with a powder containing calomel one part, boracic acid three parts and amylum and talcum, four parts each. If the irritation is severe, the parts can be wet with a lotion such as calomine, drams 2, zinc oxide, drams 2, lime water, ounces 2, boric acid (sat. sol.) q. s. ounces 8. This mixture should be well shaken and allowed to dry on the parts to which it is applied with pledgets of cotton.

If symptoms of acute invasion of the bladder occur, the patient is put to bed and given a milk diet. Salol and hexamethylenamine are administered by mouth in large and frequent doses in the beginning. Hot sitz baths twice daily of fifteen to twenty minutes give some relief from the tenesmus. Warm irrigations of mild boric acid solutions are of value. After the last of the irrigation has been given and drained off, four ounces of a five per cent argyrol or protargol solution should be injected in the bladder and left until voluntarily voided. If the chronic stage results silver nitrate irrigation is the best treatment. The solution should be gradually increased from 1-5000 to 1-500. If the higher strengths give too much pain the bladder must be cocainized before.

Local treatment of the urethra is not instituted until the acute stage has elapsed. The two best drugs are argyrol in solutions in strengths of twenty to fifty per cent, and silver nitrate in solutions from 1-1000 to thirty per cent. Argyrol should be thoroughly massaged into the urethra by the aid of the urethroscope. This remedy should be used frequently and for long periods of time until microscopical examinations for gonococci are negative. [L. silver nitrate irrigations in solutions of 1-1000 may be preferable.]

The acute vaginitis is best treated with warm douches of potassium permanganate 1-1000 or 1-2000. The vagina must be ballooned out and the folds of mucous membrane eradicated. Once daily a ten per cent argyrol solution should be swabbed in the vagina and a tampon soaked in the same solution left for three or four minutes, when the mucosa is wiped dry and a tampon dusted with some drying powder as tannic acid inserted.

TUMORS OF THE SIGMOID.

Among the symptoms of tumor of the sigmoid must be placed disturbance of function causing irregularity of the bowels, and gripings attended by discharges of mucus, blood and occasionally a little pus. These mucous discharges are not necessarily accompanied by feces. Very often there is an unsatisfied feeling, with straining, after the evacuation from the bowels. In the majority of cases the first real evidence of tumor is brought about by interference with the progress of the bowel movement, giving rise to pain and borborygmus, accompanied by "stiffening" of the intestine and visible peristalsis. This partial obstruction is very significant. If it has existed for some time, the distended intestine can be seen above the obstruction, the sequence being a crampy colicky pain, visible peristalsis, stiffening of the intestine immediately above the obstruction and gurgling sounds like water and air in a bottle.—W. J. Mayo in the Montreal Medical Journal.

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKee, M. D., Collaborator.

THE BROWN COUNTY MEDICAL SOCIETY—A HISTORICAL SKETCH.

The oldest record that I find pertaining to the Brown County Medical Society is in the following minutes from an old secretary's book and as it is probably the record of the first organization of the Brown County Medical Society, I deem it of sufficient interest to give in full.

Ripley, Ohio, July 17, 1860.

Pursuant to a call by circular for the purpose of organizing a county medical society, the following physicians met in the Presbyterian church at Ripley: Drs. A. Beasley, T. B. Wylie, A. N. Wylie, D. Gould, J. C. Winters, E. R. Bell, of Ripley; Thos. W. Gordon, Georgetown; Geo. W. Gordon, New Hope; Wm. Barker, Higginsport; W. W. Salisburg, Decatur; J. N. Salisbury, Russellville; Henry L. Philips, Clayton, Adams county.

On motion of Dr. Bell, Dr. Beasley was called to the chair. On motion of Dr. Winters, Dr. Thos. W. Gordon was elected secretary. Dr. Beasley stated the object of the meeting to be the organization of a county medical society for the purpose of mental co-operation and improvement.

Dr. Philips wished the organization to embrace Adams county giving as a reason the fact that he had long endeavored to get a society formed in Adams county, but in vain. Dr. T. W. Gordon moved that the society embrace the two counties and be called the "Medical Society of Brown and Adams Counties." The motion was carried. Dr. Philips moved that a committee of five be appointed to draft a constitution and by-laws for the government of this association and that it report at this place on Saturday, the fourth day of August at 10 a. m. The President appointed the following gentlemen on said committee: Drs. Philips, A. N. Wylie, Thos. W. Gordon, David Gould and J. N. Salisburg.

Dr. Gould moved that a committee of three be appointed to prepare and present to this association at its next meeting a code of ethics and a fee bill, Dr. Gould stating that he did not want to be a member of the committee. Carried.

The President appointed Dr. Thos. B. Wylie and Wm. Barker, when a motion was made that Dr. Beasley be the other member of the committee. Dr. Gordon put the question, which was carried unanimously. Dr. Philips moved that Dr. Wylie (T. B.) be requested to notify the physicians of Adams county of the action of this society. Carried.

Dr. Winters moved that the editors of Brown and Adams counties be requested to publish these proceedings. Carried.

Dr. Bell moved to adjourn. Carried.

A postscript adds that the papers of the counties very kindly published the proceedings, naming the Ripley Bee, Southern Ohio Argus, and Brown County Republican, of Brown county, and the

Scion, and Adams County Democrat, of Adams county.

The minutes of the next meeting, August 4, 1860, state that the Medical Association of Brown and Adams Counties met in the Odd Fellows Hall, Ripley, pursuant to adjournment. The expression, "but not until 11 instead of 10," indicates that our forefathers had their troubles as well as we.

At this important meeting the constitution and by-laws were adopted as reported by the committee. The committee on ethics and fee bill reported through Dr. T. B. Wylie, the code of ethics of the former district society. This consists of seventeen rules and on the motion of Dr. Bell, another was added—Rule 18, as follows: It shall be deemed unprofessional and a species of reprehensible underbidding, for any member of this Association to attend families by the year for a stipulated sum. Any member guilty of this offense shall be reprimanded, fined, or expelled, as this Association may determine. With this amendment, the code was adopted. As an index to the general tenor of these rules, I give Rule 1:

"It is the duty of every medical practitioner to treat his patients with tenderness and humanity and to make due allowance for the mental weakness which usually accompanies bodily disease. Secrecy and delicacy should be strictly observed in all cases in which they may seem to be particularly required."

The committee also recommended the old fee bill of 1847, which the minutes state was also formed by the District Association. I have not found that bill, but the minutes state that Dr. Gordon moved that 25 per cent be added to the charges as reported in the bill, giving just about the same reasons in support of this rise that we would now, in support of another rise. Amendment carried.

Dr. Gould moved that the obstetric fee be from \$5 to \$8 for natural presentations and \$8 to \$15 for unnatural, not subject to the 25 per cent advance. Carried.

In the afternoon session the following officers were elected:

President, A. Beasley; First Vice-President, H. L. Philips; Second Vice-President, A. N. Wylie; Recording Secretary, T. W. Gordon; Corresponding Secretary, David Gould; Treasurer, E. R. Bell; officers of the First Brown County Medical Society, elected August 4, 1860.

Three censors were also elected. An executive committee, finance committee and a committee on ethics were appointed.

Dr. Gordon was appointed a committee on the

publication of constitution and by-laws. Later he reported the publication of 200 copies which were distributed equally among the members. It would be interesting to come across some of these old copies. After this the following members are reported as paying the initiation fee of \$1 and signing the constitution:

A. Beasley, T. W. Gordon, J. N. Salisbury, J. C. Winters, W. W. Salisbury, S. C. Gordon, Henry L. Philips, Edwin R. Bell, David Gould, G. W. Gordon, Thos. B. Wylie, Wm. B. Barker.

The president appointed Dr. A. N. Wylie essayist for the next meeting and T. W. Gordon to deliver a popular lecture. Adjournment to meet at Russelville on the second Wednesday in October, 10 a. m.

The Association met at Russelville as per adjournment. Present: Drs. Gould, Bell, J. N. Salisbury, W. W. Salisbury, G. W. Gordon, T. W. Gordon, Wm. Barker. The name of Dr. W. W. Ellsbery was then presented and he was elected a member.

With this meeting the records cease. I have read them with great interest but have given only a small portion. I admire the earnest enthusiasm and the systematic business way in which they proceeded and the care and wisdom shown in viewing the needs of the profession from every angle, the thoroughness of the organization and the soundness of the foundation upon which they built for a permanent and useful society.

But "the best laid plans of mice and men gang aft aglee," Already the war clouds were hanging heavily, soon to burst into a storm that raged with unabated fury for almost five years, shaking our country to its foundation and we find our secretary, whose minutes show him to be the best the Association ever had, has dropped his pen, taken up the sword, and gone to the front to do battle for his country, and for the next seven years the society slumbers.

The next minutes are dated at Ripley, April 30, 1867. They state that the Medical Association of Brown and Adams Counties met in Dr. A. N. Wylie's office at 1 p. m. This was evidently a reconvening of the old society. Dr. A. N. Wylie was chosen president pro tem. Dr. T. W. Gordon moved that the rules be suspended and that they proceed to the election of new members. Carried. The president then appointed Drs. Bell and S. C. Gordon members of the board of censors. The board reported favorably on the applications of Drs. Wm. Herbert and J. L. Wylie. They were unanimously elected, came forward, paid their initiation fee of \$1 and signed the constitution. This last expression is recorded in the case of practically every member. At this meeting the name

of the society was changed to "The Medical Association of Brown County," Adams county being dropped. A tribute of respect to the dead was shown at this meeting by the appointment of an obituary committee. Drs. T. W. Gordon and E. R. Bell were appointed on this committee. Adjourned to meet in Ripley on the third Wednesday in May following.

They met as per adjournment in Odd Fellows Hall. Dr. Y. Stephenson, of Georgetown, Ohio, and Dr. M. Smith, of Dover, Ky., joined at this meeting. Dr. Gould moved that they proceed with the election of officers. Carried. The following officers were elected:

Dr. A. N. Wylie, President; Drs. Gould and Smith, Vice-Presidents; T. W. Gordon, Corresponding and Recording Secretary; Dr. Bell, Treasurer; Drs. S. C. Gordon, J. N. Wylie and Y. Stephenson, Censors.

At the afternoon session Dr. W. A. Dixon joined. The following rules of order were adopted:

1. Minutes of the last meeting.
2. Applications for membership.
3. Admissions of candidates.
4. Report on finance.
5. Report of ethics.
6. Report of executive committee.
7. Report of cases; reading of essays, etc.

This seems to have been a star meeting, considerable other business having been transacted, in addition to a literary program. The discussion seems to have freely been entered into. The minutes are very complete, covering five large pages of fool's-cap, closely written by Dr. T. W. Gordon. I might with justice add that while he was secretary the minutes were always complete. Adjourned to meet in Ripley on October 16.

This meeting was held at the First National Bank, but the record only says, adjourned to meet November 13. Possibly the proximity of the money vaults caused a little uneasiness and they hurried to get away.

November 13, 1867 the association met in the Odd Fellows Hall, Ripley, at 10:30 a. m. Present at the morning session were Drs. J. L. Wylie, D. Gould, S. C. Gordon, E. R. Bell, H. Smith, Wm. Herbert, J. C. Winters, Y. Stephenson and T. W. Gordon. Nine in all. Not many, but how glad we would be now if, when in order to stimulate the social side of our professional life and bearing toward each other, we could arrange an all day meeting feeling confident that at least nine would attend the morning session. At the afternoon session several more were present. Dr. W. W. Ellsbery presented the name of Dr. J. F. Richardson, Dr. Bell that of Dr. Spurgeon, and Dr. Y. Stephenson that of Dr. R. A. Stephenson.

All were elected. Dr. Car B. White was received into the association at the morning session. The minutes state that Dr. S. C. Gordon read an essay on "Malaria" in opposition to the generally received opinion. Dr. J. L. Wylie read one on "General Medicine." Several cases were reported and discussed. Essayists appointed for the next meeting were Drs. Dixon, Y. Stephenson and J. Salisbury. Acute and chronic rheumatism was given as the topic for general discussion at the next meeting. Adjourned to meet in Ripley the third Wednesday in May next.

As we pore over these old minutes, we are not only deeply interested, but we receive a certain degree of inspiration, especially to do better work and to systematize it better. We also receive encouragement. For, many times, after having what we thought was an excellent meeting, full of interest, with every indication that our society was buoyantly riding on the top of the waves, we have arranged what we felt was a fine, instructive program for the next meeting, only to find at the critical moment but three or four out to partake of the feast, and our essayist facing empty chairs for auditors. We generally determine at such times that never, no, never again will we prepare another program. But we read over these minutes and find that in the face of all the evidence of prosperity and interest shown in this last meeting of November, 1867, we have absolutely no evidences of any further meeting until 1869, and the minutes of this meeting, April 30, start out by saying, "The Brown County Medical Society met as per call of the President and Secretary, published in the News and Bee," showing that the society was asleep and had to be awakened.

At this meeting delegates were appointed to the state and national associations and Dr. T. W. Gordon was recommended as a suitable person for the geological corps. It is hardly likely that this was the last meeting of the society, but it is the last of which we have any record and the awakening was but temporary. So far as we know, it slumbered on with sleep so deep that, when in 1874 it again awakened, it was the awakening at the resurrection of a new society.

Dr. Robert Prine has preserved to us a small pamphlet, entitled "Constitution and By-laws of the Brown County Academy of Medicine and the Code of Ethics Adopted by the American Medical Association, Organized May 2, 1874." A few of the departures from the old organization may be noted. It is given a new name, "The Brown County Academy of Medicine." The elective officers are President, Vice-President, Secretary, Treasurer and Board of Censors. The appointive committees are as before: executive, finance, med-

ical ethics. They are to meet on the third Wednesday of May, August, November and February. The members signing the constitution are thirty-one in all, as follows:

Drs. T. W. Gordon, E. R. Bell, J. C. Winters, A. N. Wylie, W. W. Ellsberry, D. Gould, A. M. Williamson, W. A. Dixon, Wesley Love, Isaac M. Beck, J. N. Salisbury, J. B. McClain, S. L. B. Black, S. C. Gordon, W. A. Bivans, A. M. Ellsberry, Fletcher Smith, E. B. Fee, G. Eishler, Y. Stephenson, N. S. Wamsley, W. J. Srofe, T. M. Reade, R. B. McCall, H. S. Guthrie, M. S. Dillman, Alex Gilfillen, T. Heaton, J. H. Love, W. K. Coleman.

All regulars, for the eligibility clause requires that a candidate to be eligible must be a graduate of a regular medical school, or a practicing physician eligible to graduate in such school by attending one course of lectures. This is clinched by section 6 of the By-laws which says that the members of the society shall not advise in a professional way with irregular practitioners of medicine. Section 3 authorizes the committee on ethics to keep an eye out for the violators of the constitution and by-laws and code of ethics. However desirable these may have been with conditions then existing, I am glad to say that the societies of the present have almost universally discarded the "irregular" clause, recognizing that the best way to combat Charlatanism and disease and to honor the medical profession is to present a united front and march together, standing for advancement in all things that make for thoroughness in preparation for a great and noble calling, and proficiency in combating disease, whether it be by prophylaxis or by active treatment of the already existing pathological conditions by therapeutic measures. And he who would so demean himself as not to be endeavoring to add to the *common stock* of knowledge and understanding may be deemed a drone in the medical profession a useless member of the fraternity and unworthy the support of patients. It should be noted that they adopted the code of ethics of the American Medical Association. This magnified code which is itself a good sized pamphlet of thirteen fairly large pages should be read by every practitioner of medicine and we believe it would be a good thing if each state board of medical examiners would make it one of the branches for examination, yet with all of its strict rules of professional conduct and sublime precepts of personal integrity, we believe that unless it can be made *subjective* rather than *objective*, read with a view to personal discipline rather than to learn the rules that should govern our brethren, it may become a menace to the society, because our eyes are made to look outward instead of inward and our profession which binds

us to honor also binds us to secretiveness, and we become seclusive. Am I wrong if I add also selfish and suspicious? We therefore need not be surprised if in a medical society composed of men of ambition and a high sense of honor, it should be read with critical eyes and its high ideals made to apply to the other fellow, feeling that we ourselves are above reproach. We have reason to believe that this was the case with our newly organized society. While the records of the meetings immediately succeeding the formation of this society are meagre, we have oral testimony to the fact that they had many interesting meetings, with many good papers, and some warm discussions, not only on medical subjects proper, but on ethics as well. One of the most interesting records of this period we have been able to find is a paper on this last subject by Dr. A. N. Wylie, presented February 19, 1879. It starts out as follows: "Having been appointed by the Brown County Academy of Medicine to present a thesis or paper on the code of ethics of the A. M. A.," and shows that this phase of the question was receiving due attention.

This paper is brim full of high ideals couched in language that might well be considered classic. Whether or not inspired by real or imaginary infractions of the code by some member, we do not know, but we do learn that internal dissensions arose, the society floundered awhile on a sea of strife then rested on its oars. It is probable that soon after this it floundered to be resurrected again in a new society in 1892.

In this year we find a call was made to organize a Brown County Medical Society. The meeting was held in Georgetown on May 12. Present were Drs. T. W. Gordon, W. A. Dixon, W. W. Ellsberry, Y. Stephenson, Lee Markley, James W. Kautz, R. B. Fee, S. B. Sheldon, A. W. Francis. At this meeting a new constitution was adopted. It starts out as follows: Art. I. The name of this society shall be the Brown County Medical Society. Art. XIII recognizes its relation to the state and national bodies as follows: Section 1. "This society conforms to the Constitution and By-laws of the State Medical Association and Code of Ethics of the A. M. A." Sec. 2. "This society is auxiliary to the Ohio State Medical Association and is entitled to one delegate to every five members and one to every fraction of more than one-half that number." This last clause conflicts with the present by-laws of the State Association which provide for a house of delegates in which the representation by the component societies is one to every 100 members or fraction thereof. This code was adopted as a constitution of the newly organized society, but seems

to take the place of both constitution and by-laws. As there are a few other points that need revising, I would suggest that a committee be appointed to overhaul and revise the Constitution of 1892, and report at our next meeting. This committee should be instructed to secure a copy of the last State Constitution and By-laws and revise thoroughly to conform to them, and if deemed advisable add separate by-laws for the government of this society.

This organization, like others preceding it, does not seem to have been active very long for we have no record of any further meetings until February 17, 1900. On this day the following physicians met in the court house of Georgetown and reorganized the Brown County Medical Society. Present: Drs. S. B. Sheldon, A. H. Trout, A. W. Francis, Wesley Love, H. P. Shelton, Y. Stephenson, R. B. Hannah and Lee Markley. Dr. S. B. Sheldon was elected Chairman; Dr. Markley, Secretary; Dr. Hannah, Treasurer.

The Secretary read the Constitution of the Brown County Medical Society which upon motion of Dr. Love was made the code of ethics of the Brown County Medical Society. It was further agreed that this society, being auxiliary to the state society, its code of ethics should govern the society. On the motion of Dr. Stephenson the temporary officers were made permanent and Dr. Stephenson was elected Vice-President. The dues were placed at \$1.25, \$1.00 of which went to the State Association. This organization has remained alive ever since with large and interesting meetings at times, while others have been such as to discourage the President and Secretary and all interested in the work. It might be noted that the February meetings have largely been failures and for this reason I would suggest that we adopt another date for the annual election of officers. Though I think our fiscal year should begin with January. At the next annual meeting, February 6, 1901, Dr. A. W. Mitchell was elected President, A. W. Francis, Vice-President, and R. B. Hannah, Secretary and Treasurer. At the next meeting Drs. C. W. Evans and F. F. DeVore were received. August 7 Drs. Guthrie and Leonard, and September 18 Dr. Prine was received.

February 19, 1902, the old officers were re-elected. At this meeting Dr. Clemens was received, and the death of Dr. Lee Markley was reported. The meetings of this year were fairly well attended and an earnest interest taken by all attending. Cases were reported and papers read and discussed freely. At the next election, February 19, 1903, Dr. A. W. Mitchell was elected President, Dr. Wesley Love Vice-President, Dr.

R. B. Hannah Secretary. Drs. Geo. B. Tyler and R. B. Fee were added at this meeting. At the next meeting, May 20, Drs. J. A. Hamilton, Williamson, Matthews and Gilfillen were added. Dr. Brooks F. Beebe was present and spoke on the relation of the county organization to that of the state and national. Dr. Stephenson moved that the Secretary be authorized to change the constitution to conform to that of the state organization. Carried. But as it already so nearly conformed, no change was made.

At the next annual meeting on February 14, 1904, the old officers were re-elected.

At the next meeting of May 4 the names of Drs. H. M. Chaney, John Hodkins and W. L. Faul were presented and they were elected. Dr. Joseph Stroup was added August 17.

Annual meeting of February 15, 1905. Dr. Francis was elected Vice-President. Other officers were as before.

At the next election in 1906 Drs. Mitchell and Hannah were given a rest and Dr. Francis was elected President; Dr. R. B. Shelton, Vice-President; J. C. Clemens, Secretary and Treasurer. The dues were raised to \$1.50 with good meetings during the year.

At the next election of officers Dr. A. W. Francis was elected President; Dr. J. A. Hodkins, Vice-President; Dr. A. W. Mitchell, Secretary and Treasurer. These have been annually re-elected up to the present time with the exception of the Vice-President. Dr. Hodkins moved to Dayton, and Dr. Love has filled the Vice-President's chair. During all this time the interest has been comparatively good. Many of the meetings have been excellent, with great interest and a social development which can bring nothing but good. Among those who have come from a distance one or more times to interest and instruct us are H. W. Bettman, Merrill Ricketts, Edwin Ricketts, B. F. Beebe, E. W. Mitchell, Robert Carothers, Caldwell, Withrow, Oliver, Ravogli, Whittaker, Gillespie, Larkin, Langdon, Webb, Zinke, Hays, Tantaman, Mallsbury and Hon. G. Bambaugh.

Nearly all the members have presented papers one or more times, some of them several, and many have presented interesting cases for examination and discussion. Several of the old members have passed out, while others have come in. The following is the roster of 1909:

From Ripley—A. W. Francis, Geo. P. Tyler, J. L. Wylie, Robert Prine. Georgetown—Y. Stephenson, R. B. Fee, J. H. Williamson, H. P. Shelton, R. B. Shelton, R. B. Hannah, A. W. Mitchell. Hamarsville—G. E. Rouse. Higginsport—H. S. Guthrie, Wesley Love, Clement D. Smedley. Russellville—W. L. Faul, A. Gilfillen. Decatur—A.

Wickoff, J. A. Hamilton. Aberdeen—J. A. Laughlin. Sardinia—H. M. Chaney. Fayetteville—E. W. Love. Mt. Orab—J. M. Stroup, A. C. Sidwell, L. H. Leonard. New Hope—J. G. Clemens. Lynchburg—J. W. Kautz. Five Mile—S. B. Sheldon.

This is a total of about thirty-nine physicians in the county all told, young and old. I cannot help realizing what a society Brown county would have if all of these members would make a sacrifice to attend the meetings of the society and bring their obscure or interesting cases. Anxiously take their turn in writing a paper on some subject which has been of special interest to them, look at the subject on the program before coming, then come prepared to discuss them, giving all the rest the benefit of their observation and experience. In fact, working for a high standard of excellence for the society, for the medical profession and for the individual. What a benefit to our patients and to us. And as we rub up against each other every three months and find that we are not the only ones who know something, and we begin to feel the warmth of the social side of life, how the scales and barnacles begin to fall off from sheer lack of cohesion and we see how grouchy we have been. How hard it was to see any good in any of our competitors who we find are really a fine set of fellows laboring in the same channels for the common good. Somewhat selfish and want to make money just like us. Human and occasionally erring a little just like us. Often hurt because some friends have apparently deserted them—just one condition exactly. Going by day and by night through sunshine or storm, sometimes for pay and often for charity just like us. What a mellowing, warming influence this social feature is and how many good ideas we get. Then for the sake of our fellow man, who confides in us as he confides in no other, who comes to us for advice in time of trouble, for help in time of affliction and even for solace in time of sorrow, let us strive to attain the highest plane of moral rectitude, or honor and gentility, of proficiency in our profession. Let us band together, form our societies, read our papers, discuss our problems, shake hands together, talk together, eat together, but always in charity, ever remembering that old saying, "There is so much good in the worst of us, and so much bad in the best of us, that it ill behooves any of us to speak evil of the rest of us."—A. W. Mitchell, M. D., Georgetown, Ohio.

The Adams County Medical Society met Wednesday October 12, 1910, at the Florentine Hotel, West Union, Ohio. The following was the program: Morning session, 11 a. m. Miscellaneous

business. "Enteritis in Children," C. W. Osborn, Seaman, Ohio. Afternoon session, 1:15 p. m. "Gastric Ulcer," J. E. Rogers, Peebles, Ohio; remarks by the councilor, Robert Carothers, Cincinnati.

SECOND DISTRICT

HORACE BONNER, M. D., Collaborator.

The seventh annual meeting of the Second Councilor District Medical Association was held in Springfield, Ohio, October 25, 1910. The following program was given:

Morning session, 9 o'clock. City Hospital, Clifton, York and East streets. J. H. Jacobson, Toledo, clinical lecture on goitre, operated on one or more cases. George Crile, Cleveland, demonstrated his method of direct transfusion. E. W. Mitchell, Cincinnati, clinical lecture on children's diseases.

Mid-day luncheon 12:30 o'clock, Commercial Club rooms, ninth floor Fairbank's building, corner Main street and Fountain avenue.

Afternoon session, 2 o'clock. Knights of Pythias hall, fifth floor, Bushnell building, opposite Fairbank's building. Martin Friedrich, Cleveland, health officer, "Vitiation of Air; its Dangers." F. Park Lewis, Buffalo, N. Y. "Scientific and Economic Efficiency of Ophthalmology." Alfred C. Crofton, Chicago, Ill. "Some Clinical Aspects of Pernicious Anemia."

Evening session, 6 o'clock. Annual banquet, ninth floor Commercial Club rooms, Fairbank's building.

FOURTH DISTRICT

TODD DUNCAN, M. D., Collaborator.

The general meeting of the Academy of Medicine of Toledo and Lucas County was held on Friday evening October 7, 1910. The program was as follows: "The Diagnosis and Treatment of Gastric and Duodenal Ulcer," Dr. Bertram W. Sippy, professor of internal medicine, Rush Medical College, Chicago.

A meeting of Section on Medicine of The Academy of Medicine of Toledo and Lucas County was held on Friday evening October 21, 1910. The following was the program: "Tetanus from Umbilical Infection," B. Brim; discussion opened by S. S. Thorn. Paper, "Gonorrhea," R. S. Walker; discussion opened by John Keller. "Syphilitic Lung Symptoms," R. P. Daniells. "X-ray Demonstration of Tuberculosis and Syphilis of the Lung," Harry Dachtler.

The sixty-sixth meeting of the Northwestern Ohio District Medical Association was held at the court house at Bryan, Ohio, October 12-13, and the following excellent program was given:

Wednesday afternoon 1:30.—Divine invocation, Rev. Webster T. Stockhill. Addresses of welcome, R. L. Starr, Bryan; F. A. Weitz, Montpelier. Reading of minutes, report of committees, unfinished business, new business.

Reading of essays—"Pulmonary Tuberculosis," D. G. Mortland, Edgerton, Ohio; report of some interesting lung and stomach cases, R. P. Daniells, Toledo, Ohio; Refraction—"A Neglected Remedy in the General Practitioner's Armamentarium," Alan Knisley, Lima, Ohio; "Definition of Insanity," Carl M. Sawyer, Marion, Ohio; "The Value of Tonsil Enucleation," A. L. Steinfeld, Toledo, Ohio. Address by the President of the Ohio State Medical Association, R. E. Skeel, Cleveland, Ohio.

Annual dinner 6 p. m. "The Personality of the Physician," Dana O. Weeks, Marion, Ohio, president of the Northwestern Ohio District Medical Association. Address on Surgery—"Surgery of the Upper Abdomen with Special Reference to the Stomach and Gall Bladder," Charles F. Hamilton, Columbus, Ohio. Address on Medicine—"Lumbar Puncture as a Diagnostic and Therapeutic Measure," J. H. J. Upham, Columbus, O.

Thursday morning 9 a. m.—"The Early Treatment of Diseases of the Vermiform Appendix," M. V. Repogle, Bryan, Ohio; "Mongolian Idiocy and Cretinism," L. F. Smead, Toledo, Ohio; "Nonmedical Treatment of Cardio-Vascular Diseases," R. C. McNeil, Belle Center, Ohio; "Cancer Today," George M. Todd, Toledo, Ohio; "Infectious Diarrhoea in Children," P. S. Bishop, Delta, Ohio; "Ludwig's Angina, With Report of a Case," C. F. Tenney, Toledo, Ohio.

Thursday afternoon 1:30 p. m. "Autotoxis," Robert C. M. Lewis, Marion, Ohio; "Typhoid Fever," E. D. Murphy, Antwerp, Ohio; "Typhoid Perforation," S. D. Foster, Toledo, Ohio; "Consideration of Typhoid in Children," C. L. Chapman, Toledo, Ohio; "Fifty Years in the Practice of Medicine," S. B. Kiner, Lima, Ohio; "Medical Legislation," J. A. Kimmel, Findlay, Ohio; "The Use and Abuse of the Uterine Curette," E. M. Doherty, Toledo, Ohio; "Surgical Aspects of the Prostate," Narville Dean, Kirkersville, Ohio.

FIFTH DISTRICT

H. G. SLOAN, M. D., Collaborator.

The fifty-first regular meeting of the Experimental Medicine Section of the Academy of Medicine of Cleveland was held on Friday October 14, 1910 at 8 p. m. at the Cleveland Medical Library. The program was as follows: "Psychosis Associated with Acute Infectious Diseases," (illustrated by lantern slides) Prof. Albert M. Barrett, A. B., M. D., Professor of Psychiatry

and Diseases of the Nervous System, University of Michigan, Ann Arbor, Mich.

The Huron County Medical Society met on Thursday October 13 at 10 a. m. The following was the program: "The Parasitology and Pathogenesis of Syphilis," Oscar T. Schultz, of the Pathological Department of Western Reserve Medical College, and "The Serum Diagnosis of Syphilis," R. L. Morse, of Norwalk.

The regular meeting of the Ashtabula County Medical Society was held in the Ashtabula business college Tuesday evening September 6, 1910. C. E. Briggs, of Cleveland, read a very interesting paper on "Considerations in the Diagnosis and Treatment of Acute Intestinal Obstruction." O. N. Warner, of Conneaut, presented a paper on "Anaesthetics," and O. A. Wickson, of Jefferson, gave a report of the meeting of the Ohio State Medical Association.

The seventy-second regular monthly meeting of the Lake County Medical Society was held at Painesville, Ohio, Monday evening October 3, 1910. The program was as follows: Minutes of last meeting; miscellaneous business; presentation of cases; paper by W. B. Chamberlain of Cleveland on "A Brief Review of Some Recent Advances in the Treatment of Pathologic Conditions of the Nose."

EIGHTH DISTRICT

J. R. McDowell, M. D., Collaborator.

The annual meeting of the eighth district will be held in Zanesville on November 25. Papers will be presented by men from the district and also by prominent men of the profession from New York, Chicago, Cleveland and Toledo. The following program will be carried out:

"Surgical Clinic," by Julius Jacobson, of Toledo, and a "Medical Clinic" possibly by C. F. Hoover, of Cleveland, in the morning at the Good Samaritan Hospital.

Luncheon given by the Sisters of the Good Samaritan Hospital.

Business session and presentation of papers at the high school auditorium in the afternoon.

Dinner at 6 p. m. at the St. James Episcopal parish house to the visiting physicians, by the Muskingum County Medical Society, followed by presentation of papers in the evening.

A cordial invitation is extended to all the physicians of the state to come and spend the day. Every effort is being made to make this the best meeting ever held in the district and it is hoped to have a record breaking crowd.

At the last regular meeting of the Muskingum County Medical Society the following program was presented:

"Nephritis Complicating Pregnancy," W. F. Sealover; "Abortion," H. F. Lorimer.

A committee was appointed to meet with the local members of the State Legislature and discuss with them whatever bills may come up before the coming session of the Legislature pertaining to the medical profession.

TENTH DISTRICT

FRED FLETCHER, M. D., Collaborator.

At the regular meeting of the Columbus Academy of Medicine held October 3, the following was the symposium: "Carcinoma of the Cervix Uteri." (1) "Our Present Knowledge of the Etiology of Cancer," Eugene F. McCampbell; (2) "The Early Recognition of Carcinoma of the Cervix Uteri," F. F. Lawrence; (3) "The Diagnosis of the Operability of Carcinoma of the Cervix Uteri (open discussion); (4) "Palliative Treatment of Inoperable Cases" (open discussion); (5) "Results Obtained from Radical Operation," J. F. Baldwin and E. M. Gilliam; (6) general discussion—Frank Warner, J. U. Barnhill, W. J. Means, A. S. Barnes, J. F. Baldwin, F. F. Lawrence, J. H. J. Upham, E. M. Gilliam and C. F. Larimore.

Meeting October 10. Program: Pediatric Symposium. (1) "Infant Feeding—Practical Method of Milk Modification," J. D. Snyder, J. W. Clemmer, D. L. Moore. O. H. Sellenings and G. C. Schaeffer. (2) "The Treatment of Constipation of Childhood," S. B. Taylor and C. C. Ross. (3) "Treatment of Hernias in the Very Young," J. E. Beery, C. E. Turner, L. L. Bigelow, W. J. Means, Frank Warner, E. M. Gilliam, Albert Cooper and E. W. Schueller. (4) "Prognosis and Treatment of Acute Anterior Poliomyelitis," G. T. Harding, G. M. Waters, D. L. Moore and A. M. Steinfeld.

Meeting October 17. Symposium, "Tuberculosis." (1) "Skin Tuberculin Reaction," G. W. McGavran. (2) "Where Shall We Send Our Tuberculous Patients?" C. O. Probst. (3) "Diagnosis of Pulmonary Tuberculosis," illustrated with skiagrams, John D. Dunham. (5) General discussion—A. M. Steinfeld, Frank Winders, C. M. Shepard, Frank Warner, C. O. Probst, J. D. Dunham and C. W. McGavran.

Meeting October 24. Eye Symposium. Exudates and Hemorrhages Within the Eyes. (1) Introductory remarks, C. F. Clark. (2) "Management and Constitutional Treatment," Frank Winders. (3) "Treatment of Ocular Affections Complicat-

ing Nervous Diseases," W. D. Deuschle. (4) General discussion.

J. F. Baldwin presented the following specimens October 10:

(1) The remains of a kidney, containing a number of small stones. The patient had been operated upon in an eastern city a few months before for an irregular form of *tiédouloureux*. No organic disease was found present at the time of that examination, but a decompression operation was made in the hope of relief. No relief was afforded by the operation, but a few weeks later, pus having been discovered in his urine, a radiograph showed the presence of a number of stones in the left kidney. These stones were removed, one of them being very large, but the kidney was not removed. He was at once relieved of his head pains, and remained free of those pains for two months, when they returned together with discomfort in the kidney. A radiograph taken showed more stones in the kidney, and it was accordingly advised that these stones be removed, or the entire kidney if it was found seriously disorganized. At the operation, which had been made three or four days before, the kidney was found practically entirely destroyed, and it was at once removed, the operation being exceedingly difficult because of extensive adhesions, almost cartilaginous in character. Since the removal of the kidney the patient had again been free from pain in the head, which had been continuous for many weeks, and the query was propounded whether it might possibly be that the head pains were in the nature of referred pains, and a permanent cure be secured by removal of the kidneys. Further report promised.

(2) A fibroid tumor, about the size of a baseball, removed from the junction of the neck and body of a uterus, three months pregnant. Patient had already had one miscarriage, probably due to the presence of a tumor, and a miscarriage was threatening at the time of the operation. The tumor had been enucleated in the hope of saving the uterus, but after its removal it was found that the uterine cavity had been opened, the placenta being exposed, and accordingly the operation was completed by a supra-vaginal hysterectomy. The placental tissues were found already necrotic. Patient convalescent.

(3) A two-horned uterus successfully removed from an elderly lady who had given birth without any difficulty to three children, the operation having been rendered necessary by extensive pelvic disease. Attention was called to a previous similar specimen which had been presented to the academy in which five children had been born normally. The doctor also called attention to the

fact that these deformed uteri were probably more frequent than had been supposed, and that except for pathological conditions their presence would not be discovered. Referred in this connection to a recent report by a western surgeon of a case in which he had found a pregnant horn and had removed it, the probability being that had he let it alone the woman would have delivered herself without difficulty.

(4) A fibroid about four inches in diameter, completely covered by a calcareous shell from one-eighth to one-fourth inch thick. The patient was sixty-five years of age, and had known of the existence of an abdominal tumor for twenty-five or thirty years. At one time it had been treated by electricity. After the menopause she was quite comfortable for several years, but for a year had been suffering, and finally an operation became necessary. It was then found that two tumors were present, of about the same size. One was an ordinary fibroid; the other was the specimen presented. The latter was found, on examination of the mass removed, to have been the center of an abscess. Prompt recovery.

He also presented an instrument which had been devised by T. B. Noble, of Indianapolis, for use in the removal of cancer of the rectum. He reported four cases in which he had used the device with excellent satisfaction and showed a modification of the instrument which he had made, which he thought would materially increase its ease of manipulation.

The regular monthly meeting of the Knox County Medical Society was held in the assembly room of the Y. M. C. A. on Friday October 14, 1910, at 3 p. m. The program was as follows: "The Early Diagnosis and Treatment of Acute Catarrhal and Purulent Otitis Media," N. R. Eastman; "Symptomatology and Diagnosis of Acute Mastoiditis," C. K. Conard. Charles Harrod, of Columbus, attended the meeting and discussed the subject which he considered of great importance to the general practitioner in nose, ear and throat work.

NEWS NOTES

After October 10, 1910, the undersigned will be located at rooms 507-508-509 Central National Bank building, formerly at 47 W. Main St., Dr. G. F. Shawaker, Columbus, Ohio. Practice limited to genito-urinary diseases.

F. S. Baron, of Zanesville, has just returned from a three months' visit to the eye, ear, nose and throat clinics of London and Vienna. He has removed his offices to the People's Savings

Bank building and will confine his practice to the eye, ear, nose and throat.

Albert C. Miller has removed to Columbus and announces that he will limit his practice to the diseases of the eye, ear, nose and throat. He has opened an office at 206 E. State St.

H. H. McClaran wishes to announce that he is now located at 885 South St., Toledo, Ohio. Home phone R-5707; Bell phone M-3837.

MUST COME TO TIME.—J. C. Van Fossen, of Middleburg, Noble county, was arrested Wednesday upon complaint of the state medical board, which charges him with practicing medicine without a license. The board cautioned him against doing this about a year ago.

Secretary Frost of the state pharmacy board caused the arrest of fifteen druggists in Cleveland in June on charges of not employing registered pharmacists, and each was compelled to pay a fine. He went to Cleveland Wednesday and found that at least five of these druggists were still violating the law in the same way and he filed new affidavits against them. He may also proceed against some of the others. If they persist in their disregard of the law they will probably forfeit their right to engage in business.

MEDICAL SOCIETY MEETS.—The McDowell Medical Society, at its annual meeting in Cincinnati September 15, elected the following officers: President, Dr. S. Cary Swartzel; Vice-President, William L. Shollenbarger; Secretary, Franz Miketta, and Treasurer, Peter E. Kilgour.

COMING MEETINGS.—Am. Assn. for Study and Prev. Infant Mort., Baltimore, November 9-11; American Association of Railway Surgeons, Chicago, October 19-21; Hawaiian Territorial Med. Assn., Honolulu, November 26-28; Ohio Valley Medical Association, Evansville, Ind., November 9-10; Southern Medical Association, Nashville, November 8-10; Virginia, Medical Society of, Norfolk, October 25-28.

EYE MEN MEET.—The American Academy of Ophthalmology and Otolaryngology held its annual meeting in Cincinnati September 19-21. The following officers were elected: President, John J. Kyle, Indianapolis; Vice-Presidents, F. Park Lewis, Buffalo, Samuel Iglauer, Cincinnati, Burt R. Shurly, Detroit; Secretary, George F. Suker, Chicago (re-elected), and Treasurer, Secord H. Large, Cleveland. Indianapolis was selected as the place of meeting for next year.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—At the thirty-sixth annual meeting of this association, held in Detroit, Mich., on September 13, 14 and 15, under the presidency of Frank P. Norbury, of St. Louis, Mo., officers for the ensuing year were elected as follows: President, Robert H. Babcock, of Chicago; First Vice-President, Arthur D. Holmes, of Detroit; Second Vice-President, Charles E. Barnett, of Fort Wayne, Ind.; Secretary, Henry Enos Tuley, of Louisville (re-elected); Treasurer, S. C. Stanton, of Chicago (re-elected). The selection of the place of meeting and of the chairman of the committee on arrangements for 1911 was left to the executive committee with power to act.

X-RAY SOCIETY ELECTION.—The annual meeting of the American Roentgen-Ray Society was held in Detroit September 28 to October 1, and the following officers were elected: Percy E. Brown, Boston, President; Frederick H. Baetjer, Baltimore, Secretary, and Charles F. Bowen, Columbus, Ohio, Treasurer.

INJURED IN COLLISION.—Morris D. Stepp, Cleveland, fractured three ribs and sustained internal injuries in a collision between his automobile and and electric car near Cleveland September 25. Mrs. Stepp and her two small children were killed in the accident.

THE DIRECTORATE OF THE GIBBS LABORATORY.—Captain Leon T. Le Wald, of the Medical Corps of the United States Army, has resigned his commission to become director of the Edward N. Gibbs X-ray laboratory, succeeding E. W. Caldwell in this position. The Gibbs laboratory is a part of the New York University and Bellevue Hospital Medical College, and Dr. Le Wald will also be instructor in rentgenology in the university. Dr. Le Wald was instructor in pathology at this university prior to his entrance into the army in 1902. Dr. Le Wald was stationed at the Columbus Barracks, and for two years an active worker in the Columbus Academy.

HARVEY SOCIETY LECTURES.—The sixth course of Harvey Society Lectures under the patronage of the New York Academy of Medicine begins October 15 when Prof. Hans Chiari of the University of Strasburg, Germany, delivers a lecture on "The Significance of Pathologic Autopsies and Other Pathologic-Anatomic Investigations." The succeeding lectures are as follows:

November 5—Prof. W. E. Castle, Harvard University, "Unit Characters in Heredity."

November 19—Prof. Jacques Loeb, Rockefeller

Institute for Medical Research, "The Prevention of Toxic Action of Various Agencies Through the Prevention of Oxidation in the Cell."

December 10—Prof. Harvey W. Cushing, Johns Hopkins University, "Certain Clinical Aspects of Dyspuitarism."

January 14—Prof. Arthur R. Cushny, University of London, "Therapeutics of Digitalis."

February 14—Thomas B. Osborne, Connecticut State Agricultural Experiment Station, "The Chemistry of the Proteins."

March 25—Prof. H. Gideon Wells, University of Chicago, "Calcification and Ossification."

DEATHS

J. O. Lieuellen, Starling Medical College, 1898; died at his home in Maineville September 5 from the effects of a gun shot wound of the head; aged 36.

J. T. Troutman, Missouri Medical College, 1877; died at his old home in Wooster, after a surgical operation; aged 65.

James Donnelly, University of Michigan, 1883; died in St. Vincent's Hospital, Toledo, September 4, from typhoid fever; aged 53.

Joseph Boyd, Medical College of Ohio, 1888; died September 16, in Oxford, from nephritis; aged 47.

E. M. Bancroft, Eclectic Medical Institute, 1892; was killed instantly by the overturning of an automobile at Warren September 13; aged 42.

J. M. Rogers, University of Wooster, 1877; died at his home in Louisville September 1 from nephritis; aged 64.

Elizabeth Griselle, Woman's Medical College, 1856; died at her home in Salem August 23 from pulmonary tuberculosis; aged 79.

Katherine Kurtz, Hahnemann Medical College, 1882; died at her home in Akron from pneumonia; aged 57.

Archie A. Sweet, Ohio Medical University, 1905; died at his home in Mingo Junction September 30 from typhoid fever; aged 30.

L. E. Cook, Eclectic Medical Institute, 1892; died suddenly in his automobile September 23 from heart disease; aged 51.

T. A. Dillon (license, ten year practice) died recently at his home in Dayton from heart disease; aged 53.

F. L. Gage, Long Island College Hospital, 1876; died at his home in Delaware September 19 from arteriosclerosis; aged 63.

BOOK REVIEWS

TEXT-BOOK OF HYGIENE. A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Standpoint. By Geo. H. Rohe, M. D., late Professor of Therapeutics, Hygiene and Mental Diseases in the College of Physicians and Surgeons, Baltimore, etc.; and Albert Robin, M. D., Professor of Pathology, Bacteriology and Hygiene, Medical Department Temple University and Philadelphia Dental College, etc. Fourth Revised and Enlarged Edition, with many illustrations and valuable tables. Philadelphia: F. A. Davis & Co., Publishers, 1908.

Not only has the present volume been revised and enlarged, but many new subjects have been introduced and several new chapters added.

The entire work is replete with valuable information. So many and important are the subjects treated that it would be useless to try to discuss them all.

Many illustrations and tables are inserted, all of which help to elucidate the work. We have every reason to believe that this edition will find many interested readers and be more satisfactory than ever.

A TREATISE ON FRACTURES AND DISLOCATIONS.—By Lewis A. Stimson, B.A., M.D., Professor of Surgery in Cornell University Medical College, New York. New (6th) edition, thoroughly revised. Octavo, 876 pages, with 361 engravings and 65 plates. Cloth \$5, net. Lea & Febiger, publishers, Philadelphia and New York, 1910.

This revision of Dr. Stimson's work keeps up the high standard set by the ones preceding it.

The additions represent a series of fractures that have come more prominently before the profession in the last few years owing to the aid of more thorough X-Ray examinations.

Those of special note are the fractures of the floor of the acetabulum, and of the internal epicondyle of the femur. Under dislocations we find a new section on the backward dislocation of the lower jaw.

Other additions of importance relate to treatment.

On the whole, the ground has been very thoroughly covered, and the book represents the latest knowledge now at hand in regard to all typical lesions.

This volume is exceptionally well supplied with skiagrams and cuts. With the yearly increase of traumatic surgery we predict an increasing popularity of this complete work.

No operation for hemorrhoids should be done without a thorough examination of the heart and abdomen to discover etiologic obstructive conditions.—S. S.

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ORIGINAL ARTICLES

SYMPOSIUM ON MOVABLE KIDNEY

ETIOLOGY, RESULTS AND TREATMENT OF MOVABLE KIDNEY.

R. E. SKEEL, M. D.,
Cleveland.

[Read before Ohio State Medical Association.]

To fulfill the promise of the title of this paper would mean the preparation of a monograph, instead of which a sketchy, short paper is the intention.

Normally, the kidney has a certain ill-defined and limited range of motion under the influence of respiratory movements, changes of position, and variations of tension in the muscles of the abdominal wall.

Abnormal mobility, speaking anatomically, has been defined as that degree which allows an excursion exceeding one and one-half inches, and floating kidney anatomically includes only those rare instances in which the kidney is an intra-peritoneal organ provided with a mesentery.

Anatomical mobility, as above defined, and pathological mobility, meaning by the latter term such degree as is productive of symptoms, by no means coincide. Anatomical mobility was said by Edebohls to exist in twenty per cent of all women, and Noble found it present in twenty-five per cent of all gynæcologic patients. While I have not tabulated my cases I am quite confident that the percentage is considerable higher than that given by either.

Edebohls thought that four per cent of all women had symptom producing *ren mobilis* or, to put the figures in another way, that four-fifths of the patients were without symptoms, while Noble puts the number at one-half. I feel quite certain that in more than one-half the instances in which

an anatomical degree of mobility can be made out there are symptoms directly referable to it, but these symptoms are of such a trifling character that the patient is scarcely conscious of their presence unless attention is drawn to them.

The kidney is provided with no ligaments and is maintained in its position by no supporting structures beneath it. Being an extra-peritoneal organ it has no mesentery, and its pedicle contains none of the histological structures whose physiological function is that of support. It is invested by its own peculiar fatty capsule immediately outside of which is the peri-nephritic fascia formed by the division of the sub-peritoneal fascia into two layers, one of which passes in front, the other behind the kidney. These layers meet external to and also above the organ, but internally the posterior attaches to the spine while the anterior fuses with a similar layer from the opposite side. Below the kidney the anterior and posterior layers also fail to fuse, the posterior running directly downward into the iliac fossa. The posterior layer is firmly fixed, but the anterior over a portion of its area, is in contact with the peritoneum and posterior surface of the colon, both of which are movable. Even posteriorly there is no positive fixation of the organ itself, but only such as may be gained by the delicate trabeculæ of connective tissue running from the proper capsule into the fatty capsule, thence connecting with the peri-renal fascia behind the latter. Undoubtedly the pedicle, with its stout thick renal artery assists in maintaining the kidney in its ordinary position, as must also the intra-abdominal pressure.

Considering all the probable elements concerned in holding the kidney in place, it is rather surprising that it ever retains its normal location.

ETIOLOGY.

Foremost in the list of causes of movable kidney given by practically all authorities is emaciation, leading to absorption of peri-renal fat. Theoretically this must have but a limited effect in this

* Discussion follows third paper.

direction. Fat as such supports nothing and the delicate connective tissue is not absorbed when emaciation takes place. In addition the fat about the kidney is not deposited until the eighth or tenth year, previous to which time movable kidney is certainly not universal. That movable kidney is present in a large percentage of emaciated women is obviously unknown. Even if the patient were examined before emaciation occurred and this condition was not discovered does not prove that it did not exist, as it might readily fail of recognition through a fat abdominal wall and be found through a thin one. It is likely that absorption of fat in the abdominal cavity and also in the abdominal wall might tend to lower intra-abdominal tension and thus contribute in a minor degree to the production of renal mobility.

Repeated pregnancy is probably given as the next most common cause of movable kidney. Failure of the abdominal walls to undergo proper involution certainly must diminish intra-abdominal pressure through lowered tension of the muscles, but Harris found upon examining one hundred and five patients with movable kidney that fifty-two were never pregnant and fifty-three had borne one or more children, so that this factor is at least unimportant. The same writer has shown that the "post hoc ergo propter hoc" fallacy is responsible for the inclusion of traumatism as an efficient primary cause.

Constipation, assumed by Harlan to have some sort of deleterious effect upon the neighboring peritoneum and thus to lead to its loosening, has obviously jumped several gaps in the pathological processes which would necessarily be involved in such morbid activity. It remains to be proven that the peritoneum is in any way affected by constipation and that local absorption from the colon has any effect whatever upon this serous membrane. Colonic tugging through the nephro-colic ligament of Longyear might add some weight to a kidney, but that it is really a marked factor is not by any means beyond the possibility of doubt.

I believe it has been conclusively proven that bodily configuration is directly responsible for movable kidney. Mechanically it is certainly plausible that the widely expanding iliac fossæ of women would more readily permit the kidneys to drop down the inclined plane thus presented than along the same surfaces in men, and movable kidney in the male is very rare, but it remained for Becker and Lennhof to demonstrate the close connection existing between a narrow body zone extending from the plane of the xiphoid to the plane of the tips of tenth ribs, and movable kidney. Mathematically it is impossible for the kidneys to

remain in this zone if its cubic capacity is insufficient, and to a certainty the right kidney would be the first to escape because of the presence of the greater part of the liver on the right side.

Harris has elaborated upon this view and there is really nothing to add to his demonstration.

Considered in a philosophical way it is strange that nature should have blundered in the construction of the body to such an extent as to permit the production of so annoying a condition as this one in so great a proportion of women, and the same easy dislocation from the normal is also observed in one other essential organ, that is the uterus. While the latter organ has certain ligaments which act as stays and guyropes, it also is at the mercy of certain associated factors, more particularly intra-abdominal pressure. No other essential organs are so subject to purely mechanical disturbances as these, and while such mechanical disturbances are but rarely dangerous to life they are many times the source of much discomfort.

In quadrupeds no such tendency to displacement is to be noticed and in the position assumed by quadrupeds intra-abdominal pressure, as well as its weight, tends to keep the uterus forward toward the anterior abdominal wall, while intra-abdominal pressure acts constantly to drive the kidney further in the direction of the cephalic extremity of the body. Man must have assumed the upright position more rapidly than the formation of supporting structures justified, or else evolution failed and left a weak link in the chain; while some of the modern adjunct of civilized dress, such as corsets, and tight waist bands assist in keeping these organs in their abnormal location once they have departed from the normal. I had presumed this to be an entirely original observation, but find practically the same statement in the last edition of Ashton's Gynæcology.

SYMPTOMS.

To enumerate all the symptoms which have been attributed to movable kidney would occupy an entire session, and I believe I am not exaggerating when I say that neurologically they run all the way from neurasthenia and hysteria to insanity, and practically all the disorders of the digestive system excepting carcinoma have been attributed to it. The urinary symptoms are less frequently mentioned, but Edebohls thought that nephritis was often produced and hæmaturia and frequent urination are sometimes given as direct results of the movable kidney.

In order to logically attribute a result to a given cause there must be some reasonable basis by which such a cause may bring about such a result,

there should be a fair uniformity in the results produced whenever the cause is operative, and there should be certain knowledge that the presumed cause preceded the result in point of time. Viewed in this light the dependence of many, even the majority of the symptoms usually given, is doubtful to say the least. The same old medical error creeps in here as elsewhere of mistaking a part for the whole and assuming that because two pathological conditions are present simultaneously they must therefore stand to each other in the relation of cause to effect. If the observer is obsessed by the kidney condition it causes neurasthenia; if he is obsessed by the central nervous system view then neurasthenia produces movable kidney. The reflex theory has also been as greatly overworked here as in any other part of the body with the possible exception of the female pelvic organs.

That movable kidney may be productive of neurasthenia I am quite convinced, but only when the frequently recurring pain keeps the patient in a state of constant nervous apprehension and not by any subtle reflex extending its malign influence throughout the body. Reflex arcs are usually short ones like the vesical disorder in hemorrhoids or the rectal tenesmus in cystitis. Reflex arcs are usually well defined anatomically, like the Head zones, and I am convinced that the only symptoms we can place any dependence upon as actually having their origin in this disorder are purely local. The one common symptom, local pain, is of three distinct types; one the dragging in the right or left lumbar region, another the sickening pain produced by pressure upon the displaced organ while stooping or bending when the waist is constricted, and the last and least frequent the severe pain of Dietel's crises produced by acute kinking of the ureter and torsion of the vessels. Dragging pain is the most common and is more likely to be produced by slight mobility than by free floating of the organ. It is the source of much more discomfort than is generally thought because the lesser degrees of mobility are so universally overlooked. There is nothing especially characteristic about it excepting its location, its one-sided character and its reproduction when the kidney is caught between the hands and dragged downward below the costal arch. Its cause appears to be traction upon the nerves in the pedicle which are not as yet overstretched, but it may equally well be caused by tension upon all the weak attachments of the kidney which are not at this stage completely loosened.

The second type is usually recognized by the patient's description being produced by certain motions, usually while wearing a corset, and relieved

by removal of the corset and lying down, and this pain is readily reproduced by pressure upon the dislocated organ.

The third type may be recognized if the patient is seen during an attack by the marked enlargement and tenderness upon palpation.

The associated digestive disorders are of considerable interest. Constipation is frequently associated with a loose kidney, but so it is with every other chronic disorder to which the human female is subject, excepting only chronic diarrhea. Chronic appendicitis was said by Edebohls to be a direct result of movable kidney, but as the microscopist is able to find some deviation from the normal in the majority of appendices nothing is proven by this association. Nausea and vomiting are caused in some instances of marked displacement, associated with severe attacks of pain, just as nausea and vomiting are produced by other painful affections in the abdominal cavity. Jaundice is said to have been caused in many instances by this abnormality, and Gallant of New York has reported several cases which he has cured by special supports and corsets. With our ever-increasing knowledge of the various diseases of the biliary tract and their well-known intermittent character the case again fails of a convincing amount of proofs. I would not for a moment deny the possibility of all these disorders being produced by movable kidney, but wish to emphasize the fact that while they might be it is by no means proven that they are, and the only thing which can be proven is that in a fair number of instances movable kidney is productive of local pain, and in a much smaller number is productive of actual organic change in the form of acute congestion and hydro-nephrosis. In the lesser degrees of mobility the urinary symptoms are surprisingly few. When ureteral kinking and obstruction are marked they become much more pronounced.

DIAGNOSIS.

The diagnosis is usually easily made. Palpation between the hands with the patient upon her back suffices if there is free mobility, and the kidney is then readily grasped during deep inspiration. Tumors of the cœcum may mislead or a distended gall bladder be mistaken for the kidney, and vice versa, but the movable kidney can be readily pushed back into place, while the cœcum is fixed, and the gall bladder moves more readily from side to side and can never be quite displaced into the kidney region. In obscure cases inflation of the colon is of great value as the tympanitic area is then in front of the kidney while the gall bladder is rendered more prominent. One differential sign of great value which I happen not to have seen men-

tioned is the distinct tug which the gall bladder gives upon returning upward during forced expiration. While the kidney distinctly tends to slip upward under the same circumstances there is no such characteristic drag upon it as is the case with the gall bladder. In the lesser degrees of mobility everything depends upon palpating the kidney and reproducing the pain from which the patient suffers. Under these circumstances examination with the patient well over upon the opposite side or leaning forward with the hands supported while standing is necessary.

TREATMENT.

A movable kidney, normal in size and giving rise to no local symptoms, needs no treatment. In some cases a properly fitting corset diminishes the capacity of the lower abdomen, closes the open space into which the kidney glides and by thus partially fixing it gives sufficient relief. In most instances, as has been remarked by Harris especially, it is not the malposition which needs correction so much as the abnormal mobility. Pads, I am convinced, are an entire delusion which has grown out of the use of pads upon trusses for hernia, overlooking the plain anatomical fact that the kidney passes through no definite canal or ring and that an efficient amount of pad pressure to control the kidney would be both painful and injurious.

Operation is the only resort in most instances in which the kidney is found to be definitely responsible for the discomfort which the patient suffers. As the surgical side of the subject is to be taken up by the next speaker I shall confine myself to a very few remarks concerning operations and not go into the subject in detail.

In a general way the operative procedures fall into two classes, one in which the kidney is suspended by cicatricial tissue from the posterior abdominal wall, the other in which an attempt is made to close the retro-peritoneal space into which the kidney moves. The steps involved in the first class of operations are the exposure of the kidney, stripping away the fatty capsule, and suturing the kidney in one of many different ways, to the muscles and fascia of the back and even to the periosteum of the last rib. Any of the methods used are curative in a fair proportion of cases, but there are many failures as one might expect from the known behavior of scar tissue under pressure or as in this case traction. While unopposed cicatricial tissue always contracts, its capacity for stretching under constant tension is well known and the area of the kidney which becomes adherent is always problematical while the traction is constant. I have always been unfavorably im-

pressed while performing nephropexy by the disproportion existing between the weight to be carried and the very slight adhesions which were presumed to support it. Closure of the space below the kidney by suturing the parietal peritoneum to the posterior layer of the peri-renal fascia seems more logical but offers the theoretical objection that the peritoneum is so elastic that it may well give in front of the sutured area. Personally my best results have obtained by a combination of both methods, using Baldwin's method of suspension and then obliterating Girotta's space by a few catgut sutures.

In conclusion I would express my belief that the remote etiological factor in the production of movable kidney is evolutionary, the immediate, the special body form as depicted by Harris.

The results are almost entirely local with some radiating pain, save in the cases of twisted or kinked pedicle, and the associated neuroses are concomitants only.

That many instances of indefinite pain, particularly right-sided pain, are due to unrecognized mobility of moderate degree.

That the great majority of recognized cases need no treatment, a number in which the discomfort is slight, while mobility is great are sufficiently relieved by proper clothing and corsets, but that severe pain and constant dragging can be permanently relieved by operation only.

THE MOVABLE KIDNEY FROM A MEDICAL STANDPOINT.

M. J. LICHTY, M. D.,
Cleveland.

[Read before the Ohio State Medical Association.]

I bring this title before you to study with me the old subject of movable kidney from a medical standpoint. The study is to be based upon four hundred and twenty cases. And the subject is of course familiar and no doubt interesting to all of you. I do not wish to burden the remarks with figures but I think I can support my views most easily by a later reference at least to a few figures and percentages. Out of about 4000 private cases seen in recent years upon whom physical examination was made and a record kept of the patients' symptoms and physical signs, there were 420 or more than 10% of cases which showed the presence of a palpable kidney either upon the right or left side or both sides. The statement should be made that this number of cases was not compiled with any extraordinary incentive. The examina-

tion of these patients and the record of the cases was merely a matter of routine and not for the purpose of showing figures by digging up as many cases of movable kidney as possible. There is no doubt at all that many more cases escaped notice in the rather hasty examination often made. The search for palpable kidney was usually made by placing the patient in the dorsal position with the shoulders and knees slightly elevated and the abdominal muscles relaxed. Endorsing the opinion of others that if a kidney can be easily palpated in this position it should be considered as a kidney of excessive mobility, I find there are two common classifications or sets of terms applied to the movable kidney, both of them referring simply to the degree of mobility. One classification gives three degrees of mobility, namely, first, second and third degree. The other uses the term palpable, floating and wandering kidneys. The two are practically synonymous. The merely palpable kidney should be considered as a kidney movable only in the first degree where the lower pole or lower third of the kidney alone can be felt. The so-called floating kidney has greater mobility where a half to nearly the entire body of the kidney can be felt during deep inspiration and is the movable kidney of the second degree. And last is the wandering kidney occasionally described as the movable kidney of the third degree where the kidney is found entirely out of its normal position. It can be palpated throughout and the fingers of the palpating hands can be brought in touch with each other above the upper border of the kidney. The two classifications of first degree or palpable, second degree or floating, third degree or wandering, are therefore practically synonymous. The cases reported were usually examined only in the dorsal position and the mobility of the kidney was thus discovered only in the course of routine examination of abdominal organs. It was very seldom found that the erect posture with the muscles relaxed or the placing of the patient upon one side or the other made the examination more easy. It was, of course, noticed also that a kidney easily palpable at one examination was possibly not so easily, if at all, palpable at a subsequent examination. This difference could possibly be explained by greater sensitiveness of the patient or rigidity of the abdominal muscles at one examination compared to another, or even the distention of the bowels with gas or feces.

The symptoms described by these patients with movable kidney were usually symptoms of all kinds of constitutional disorders rather than the common symptoms of pain and dragging sensation referred to the middle of the back, the two symptoms so usually supposed to be associated with

floating kidney. Indeed but a small percentage of the patients complained of symptoms that would lead one to suspect that the underlying trouble was the movable kidney alone. Aside from distress and dragging sensation in the back with occasional actual pain in that region or symptoms referred to the stomach which could be influenced in a reflex manner, or to the appendix which is influenced directly by pressure of the kidney there were indeed hardly any other symptoms pointing to disturbance in the kidney unless the kidney was also diseased. In other words these patients in the great majority of instances describe symptoms arising from the underlying cause which produces this movable kidney rather than symptoms coming from the kidney itself. I will not attempt to name all these symptoms, but must refer to a few of the more common diagnoses made on patients in whom the movable kidney was found. In most of them the condition diagnosed was clearly responsible for the movable kidney and the movable kidney, therefore, could be considered merely as a symptom of the patient's condition. Glenard's disease, or neurasthenia, with a slight to a very marked malnutrition was present in more than half of these cases. Indeed the malnutrition, nervous and gastric symptoms and loss of appetite were the annoying conditions which possibly brought half of the patients to my observation.

The sex, the kidney affected, the degree of mobility and other conditions aside from those already named found in these 420 cases are as follows: Number of male patients 39, or less than 10%. Number of females 381, or more than 90%, the number in whom the right alone was affected was 288, or about 69%, both kidneys 128, or 30%, and the left kidney alone in only 4 patients, or less than 1%.

The number of cases with mobility of the first degree, which is the palpable kidney, was 135, or 32%. The number of cases in whom one or both kidneys were palpable in the second degree was 246, or 58%, while 43 cases, or 10%, had one or both movable kidneys of the third degree. In only five cases with both kidneys floating was there greater mobility on the left side than on the right. Ptosis and displacement of other organs was very common. Thus dilation or ptosis of the stomach was found in 153 cases. The palpable liver and spleen were very common, and one case with general splanchnoptosis had a floating liver, the sharp edge of which could be felt below the umbilicus, extending from the median line below the umbilicus to the right upper quadrant of the abdomen, the body of the liver being found below and to the right of this edge. One hundred and sixty-one cases had dyspeptic symptoms upon whom a

gastric analysis was made. Of this number 58% had a hyperacidity, 20% a hypoacidity, and 22% a normal acidity. Disease of the kidney, or nephritis was present in only 13 cases, or less than 3%. Appendicitis was present in 3 cases, or less than 1%. Disease of the gall bladder in 11 cases; exophthalmic goiter in 20 cases; diseases of the heart in 20; and tuberculosis in 28 cases, practically 7%. In the female, retroversion of the uterus was frequent, migraine and chronic constipation were very common symptoms. While these figures are many and perhaps excessive they after all support the argument that the movable kidney found in more than 10% of all human beings in poor health is only an associated condition with other pathological lesions.

A few other factors in the etiology aside from sex, malnutrition and conspicuous pathological lesions must be mentioned. I believe the slender form, and even heredity, together with multiple pregnancies and prolonged lactation are responsible for the movable kidney. In this number there was one woman with a right movable kidney of the second degree, who is mother of five daughters, four of whom have one or both kidneys floating.

In not a single instance was I warranted in attributing the abnormal condition to injury, such as a sudden jar, a fall, or great strain; though two of the patients of neurotic type with suits in court against corporations offered substantial inducements for a statement from me that their ill health was the result of a movable kidney following injury in railway or street car accidents.

Harris and Herzog in making an extensive study of the etiology of floating kidney a few years ago came to the very plausible conclusion that when the smallest measurement of the waist band was found below the lower pole of the kidney and below the twelfth rib, the kidney was least likely to be out of place. If the least circumference of the waist was found farther up or on a level with the central part of the kidney in normal position then the kidney would be *more* likely to move downwards. And if the same measurement was above the upper pole of the kidney then the kidney was *most* likely to move downwards.

One other cause for floating kidney must be mentioned and always deserves consideration, namely, the corset and suspension of the clothes upon the hip. The faulty female attire, though not responsible for all the ills of the sex, is an important matter. Seriously, dress reform for the fairer sex is a weighty subject which ought to receive much attention similar to many other reforms of the times. But woe unto them who make attempts in dress reform beyond certain

bounds. On the other hand the baneful results of the corset can be overestimated. I have seen quite a few young healthy girls, past the age of puberty who had never worn a corset and always had the clothes suspended from the shoulder, who after all had a floating kidney.

The discussion of the treatment of these cases can be brief. First of all let me advise to say little or nothing to the patient with a movable kidney unless there is an absolute certainty that this abnormality is causing much trouble. Most floating kidneys are harmless and the information given to a patient that there is a floating kidney is too frequently the cause of much unnecessary worry. I seldom make reference to the condition unless the patient absolutely demands a positive answer or is likely to seek professional opinions elsewhere, and then I minimize the seriousness of the condition.

A patient of mine in a noble struggle against tuberculosis, one day had distress in the right loin. The physician to whom she was referred where taking the cure unfortunately informed her she had a very pronounced floating kidney. Fortunately he pushed it up into place and promised immediate relief. The patient later informed me of my oversight and feared that my neglect caused much of her suffering. Happily my case card produced later adjusted the matter. The patient's kidney is still floating, while she herself is doing fine in another resort where taking treatment.

Only four of my cases were considered surgical on account of severe paroxysmal pains. And nephropexy has benefited all of them. In all the other cases requiring treatment the kidneys received very little consideration while the patient received a great deal. Indeed it has been my rule with these cases not to treat the kidneys so much as to treat the patient's general condition, remove or correct the underlying cause and restore the nutrition. Even then the kidney usually keeps on moving. I doubt whether any general treatment, however successful, or any mechanical appliance, and I have formerly used many appliances, ever restored a kidney to its natural position and fixed it there.

To restore the body weight is always of first importance, whether by forced feeding alone or in conjunction with a thorough rest cure is of minor importance. The return to normal weight and strength often gives these patients most pronounced relief from symptoms in due time. The proper adjustment of clothes especially in the female is next in importance. With the opposition of the proud patient or mother and the very stylish dressmaker this is often impossible. But if the patient so afflicted is sufficiently intelligent,

patient and persistent, and is supplied with the means to have clothes so made or adjusted as to be very loose around the waist and suspended neatly from the shoulders to such a degree that there is no weight upon the hips at all, then dress reform applied to that single individual accomplishes much, surprisingly much. My patients often conform eventually to this advice persistently given, and present an appearance in dress none the less pleasing. The many kind remarks from patients about greater comfort stimulates much patience in spite of disappointments.

Mechanical apparatus such as abdominal belts and binders, adhesive plasters fastened to the skin, kidney pads and special corsets are all shameful makeshifts and final utter disappointments.

I have never seen a single kidney pad that was of any value, though I have seen some applied which did much harm by pressure upon the movable kidney which slipped down beneath the pad which then held it in a fixed position of irritation.

The simplest and cheapest abdominal belt, whether made of duck, felt, flannel or web elastic, which gives support to the pendulous abdomen and lower abdominal muscles and organs is all that is required. Fancy abdominal belts and very complicated and expensive straight front corsets are no improvement whatever upon the belt, and, especially in very slender people, are often a marked detriment.

The treatment, therefore, except where surgery is absolutely demanded is altogether palliative and symptomatic.

THE MOVABLE KIDNEY FROM THE STANDPOINT OF THE GENITO- URINARY SURGEON.

E. O. SMITH, M. D.,
Cincinnati.

[Read before the Ohio State Medical Association.]

We assume that the diagnosis of movable kidney has been made and the patient comes to the genito-urinary surgeon for surgical advice and treatment. Before such advice can be given and surgical treatment instituted the surgeon must know more about that case than the simple fact that there is a movable kidney. He should know the extent of mobility. Does the kidney move but slightly or does it wander far from home? However, the severity of the symptoms is not in direct ratio with the degree of mobility. A slightly displaced kidney may produce far more pronounced symptoms than one that is freely movable. Be-

fore beginning examination the colon should be emptied. The degree of mobility can be determined by examining the patient while in different postures. First while lying flat on the back with thighs flexed the misplaced kidney can be located by bimanual palpation and can be made to slide under the hands. The patient is next turned on the opposite side and again examined, and then on the hands and knees, thus determining to what extent the kidney moves anteriorly. Lastly, the patient is examined while standing erect, in this manner demonstrating the fullest descent of the kidney.

He should know whether the mobility of the kidney is a recent development or is it a condition of long standing. Determine if he can, whether or not it was congenital. The congenital movable kidney with a mesonephron is entirely surrounded by peritoneum, while the acquired movable kidney is nowhere in direct contact with the peritoneum. It moves up and down behind the peritoneum. It is important to know whether this condition has come on after a protracted illness, such as typhoid fever, when great emaciation has resulted, or has it been a gradual development?

He should know whether or not symptoms of which the patient complains are due to the misplaced kidney. Some movable kidneys are so harmless that they are not discovered until the patient is being examined for something else. Unless it is responsible for symptoms it is not necessary to even inform the patient. If she is a neurotic and is not aware of this condition the mere mention of the fact that she possesses a movable kidney will be enough to aggravate her miserable condition and act as an inexhaustible supply of pabulum for her neurasthenic mind. However, we must not lose sight of the fact that movable kidney may produce a long train of nervous or neurasthenic symptoms. In those neurasthenics it must be determined whether the neurasthenia is primary or secondary. Was the patient suffering from these symptoms before or after the development of the movable kidney and are they merely post hoc, or, are they really propter hoc? It is exceedingly essential to know these conditions for it has been in this class of cases that the operation for movable kidney has been followed by unsatisfactory results and in consequence of which, all operations for movable kidney have been condemned by some of our profession.

The surgeon should know whether or not the patient also has a general splanchnoptosis. It is possible for a kidney to be abnormally movable without a ptosis of any of the other abdominal viscera, the same as it is possible for there to be a general enteroptosis with the kidney remaining

in its normal position. But when the two conditions are present in the same individual, the prognosis of a satisfactory operative result is not so good as otherwise. The kidney in such a patient is robbed of all of its natural support.

The genito-urinary surgeon must bear in mind not only the symptoms produced by this condition but also the pathological change that may result, secondarily. In a large majority of these cases there are not serious pathological consequences, but they do occur often enough to be worthy of our consideration. Probably the most frequent is uronephrosis, which is due to a kinking or bending of the ureter causing a mechanical obstruction to the outflow of urine.

We recall a case of left-sided movable kidney which descended into the pan of the ilium and was attended by an enormous distension of the pelvis of the ureter, which would entirely disappear when the patient would lie down and push the tumor upward. Upon operation the kidney was found to have in its substance two simple cysts which were removed and the kidney anchored in its normal position. Tuffier, in a series of forty operations for movable kidney, found twelve cases of uronephrosis. The angle in the ureter may be produced by a simple sliding down of the kidney or the kidney may rotate forward on its long axis, or it may rotate on its short or transverse axis. The kidney may become fixed in an abnormal position, thus producing distressing symptoms of a very grave nature. Illustrating this condition is a case of a young man who fell a short distance, alighting firmly on his feet, and maintained the standing posture. He immediately suffered great pain, presumably of renal origin. At the first urination after the fall there was blood in the urine. He was treated expectantly, although a ruptured kidney was suspected. In due time he was able to be about, but never felt comfortable in the right side. Upon examination a tumor was felt which we thought was the right kidney fixed about three inches lower than normal. Operation was advised and done. The kidney was found to be firmly adherent in a position much lower than normal, and there was a marked dilatation of the pelvis of the ureter. On the lower posterior surface of the kidney was found a very large stellate cicatrix as evidence of the rupture at the time of the fall. The kidney was pushed back into its normal position and sutured. The patient made an uneventful recovery and has been entirely relieved of his distressing symptoms ever since the operation, now more than three years.

Watson has reported three cases where nephrectomy was necessary on account of the damage

done to the kidney substance in dissecting it loose from its firmly adherent surroundings.

Gangrene of the kidney may result from twisting or kinking of the blood vessels supplying a movable kidney, thus producing a rapidly fatal termination, if not recognized early and promptly removed.

It is further assumed for the purpose of this discussion that the patient has been given the hygienic and mechanical treatment. In other words if the condition of nephroptosis is secondary to, and attendant upon a rapid general emaciation and loss of tissue tone, efforts should have been made to restore the individual to a normal general condition before considering surgical treatment. When these have failed and it is thoroughly established that the kidney will not remain in its normal position, and when it is producing distressing symptoms, then operation is indicated.

Those cases that are attended by marked nervous symptoms are usually not the most satisfactory for operative treatment. It is claimed by some that "a movable kidney is a mark of degeneracy in a great number of the persons who possess it. That it acts the part of a veritable internal traumatism and the resulting nervous phenomena ought to be interpreted in the light of a traumatic neurasthenia from an internal cause." While the result of the operation may be speculative in these cases it is no more than due the patient to have this mechanical error corrected, always explaining beforehand that the exact effect upon the nervous system cannot be predicted. It is not the fact that such a patient was operated upon and still had her neurotic symptoms that has caused the operation to be condemned, but the surgeon had unwittingly assured the patient that the operation would cure all of her ills. Explain to the physician who brings the patient and to the family the exact conditions present, and fewer disappointments will follow nephropexy.

When there is general splanchnoptosis it is seldom that the kidney will remain for a very long period in its normal position after fixation. Hence these cases are not favorable ones for operation. It has been suggested that a gastropexy and enteropexy should be done at the same time, thus bringing all of the abdominal organs back into place. This procedure is not to be recommended as the end results are seldom satisfactory and the patient may suffer complete anuria immediately following the operation, death ensuing in three to seven days.

The mortality is practically nil from a simple nephropexy, but it is the final results that concern both the patient and the surgeon. These depend upon two general factors, one the selection of

those cases suitable for operation which we have already briefly outlined, and the other is the operation itself. In performing nephropexy for movable kidney the surgeon must first be familiar with the normal location of the kidney. I believe a great many of the cases where the kidney does not remain fixed it is due to the fact that the normal resting place has also made some changes, possibly a deposit of fat or the adjacent tissues have encroached and somewhat obliterated the renal space. In this instance the surgeon must dissect out the fat or loosen the tissues, replace the kidney and observe the relations before introducing the sutures and anchoring. In other words be sure that the kidney is where it should be. Care must be taken that the kidney is not anchored too high, else there will be pain during inspiration. Both poles must be anchored to prevent rotation on the short axis of the kidney.

The most frequent error is to fix the kidney both too low and too far from the mid-line of the body. Sometimes the kidney has become adherent to contiguous tissues, thereby necessitating the breaking up of all adhesions, making the kidney absolutely free and unattached except by its pedicle, the blood vessels and ureter, before it can be replaced in its normal position. Having prepared a place for the kidney and having prepared the kidney for the place, the next step is to suture it so that it will remain in place long enough to become adherent to the surroundings. To encourage the formation of adhesions the capsule of the kidney may be thoroughly scarified or partly removed. I can see no objection to passing a No. 3 catgut through the parenchyma of the kidney in a curved direction with the concavity looking upward, thereby being enabled to draw the kidney into its proper place and keep it there. After the sutures are in place and it is proven that they will draw the kidney to the place where you would have it remain, introduce a few sutures into the perirenal capsule and draw it down snugly over the kidney. A small wick of gauze drain is left in and when all sutures are tied the lumbar incision is closed. The drainage gauze is removed in 24 to 36 hours. The patient is kept in bed for 18 to 21 days with a well-adjusted abdominal bandage. No renal pad or truss to be worn after the operation.

With the proper selection of cases and careful technic the operation of nephropexy for movable kidney is one of the most satisfactory in genito-urinary surgery.

DISCUSSION.

Sidney Lange, Cincinnati: I have been very much interested in this subject because I have been privileged to see a great many cases coming

from both physicians and surgeons. When I first started X-ray work, it was discouraging how seldom we found stones in the kidney when we had strongly suggestive clinical symptoms, and I felt there was something in the technic that wasn't right. But in figuring up the percentage of cases, it was found that in 70 per cent of the cases that were referred to us with a clinical diagnosis of kidney stone, we couldn't find any stone at all. Now with improvement in technic we got a perfect outline of the kidney in 80 to 90% of cases, even in fat subjects; indeed it seems that the heavy patients are easier to outline than the lighter ones on account of the heavy fatty tissue surrounding the kidney. I finally thought the position of the kidney had something to do with the causation of pain, so I devised a method of locating the kidney. Allowing the patient to lie down, and then lowering the head, the kidney would descend, and there would be some movement of the kidney. So that with a history of blood in the urine and other clinical symptoms we could make a diagnosis. Recently in the cases referred for kidney stone examination, instead of referring the cases back with the report that I couldn't find stone, I have tried to locate the kidney and tell the physician about its position, and from a series of cases I have seen I am convinced that in a certain percentage the symptoms of typical kidney stone are due to the condition of movable kidney. A movement of an inch or an inch and a half is apt to give symptoms of kidney colic. And while I have not followed the subsequent treatment I believe from what I have seen that the surgical treatment is indicated in a good percentage of cases in spite of the fact that medical treatment may relieve.

John G. Keller, Toledo: I simply want to speak on this subject from the standpoint of the urologist. It seems in considering the cases which are surgical we have to get at the cases in a different way. It has been demonstrated that the normal kidney pelvis will hold 8 to 10 c.c. of fluid. If we introduce any more than that we have a hydronephrosis. That is one point we must consider in operating all cases of movable kidney. We can also demonstrate whether the pain that the patients complain of is in the kidney or some other organ of the body by the introduction of fluid in essayist speaks of introducing the stitch through the parenchyma of the kidney. Now that is a bad procedure, because it causes destruction of tissue the pelvis. You can produce the same pain. The between that stitch and the capsule of the kidney, and its function will not be regained. To my mind the indications for operation in movable kidney are as follows: Pain, demonstrated to be in the kidney by the introduction of fluid into the pelvis of the kidney. Second, hemorrhage coming from the kidney. Third, a unilateral nephritis. Now occasionally we see a patient with a nephritis, and you do not always know whether it is unilateral or bilateral, and by fastening up the kidney you cure the patient. And the indication is a dilated pelvis, where the pelvis holds more than 12 c.c. of fluid.

L. G. Bowers, Dayton: I note the matter of diagnosis by palpation is mentioned by the essayist. We know that nervous patients are abnormally sensitive and very hard to palpate. By hav-

ing them to take a deep breath and the moment they commence to relax the muscles on expiration, they are easily palpated. Also to remind the patient to keep on breathing, and that will relax the muscles. In operating on known pelvic lesions I am in the habit of first exploring the abdomen, gallbladder, stomach, etc., and then going down to the kidney, and we will often find that the kidney is movable, and you will find a movable kidney causing slight discomfort in that side. The appendix is normal, but the kidney I have been inclined to think was the cause of the discomfort in these cases. Fixation of the kidneys cures them. As to the use of the corset, it seems to me that one of the most useful supports we have is the corset. The trouble with the use of the corset is that nowadays women try to have a small waist at the expense of everything else. I think it is the best support possible to put on. The corset in the sitting position should strike them at the groin. Then they must lace it so that they have a perfectly flat abdomen.

As to fixation of the kidney, I would not think of passing a suture through the parenchyma of the kidney. I think we have a simple way without contributing any traumatism. After making the incision we catch the peri-renal fat and pull up the kidney, and after opening that and making a bed for it cut the capsule, strip it down half an inch on each side, catching up with the forceps and pulling the kidney up into position, and then drawing the capsule into place, using chromic catgut to the muscle and fascia.

W. D. Haines, Cincinnati: The first speaker, Dr. Skeel, spoke of the kidney having no ligamentous support, and later on gave us a very nice description of such a ligament.

I have been wondering at the remark of the last speaker, Dr. Smith, and I believe it is food for thought when he speaks of loose kidney as one of the stigmata of degeneracy. I believe you will find other symptoms of this kind, if you will look around, such as a liver unduly movable, or a spleen unduly movable, and when you have all of these, what is to be gained in trimming off a bud. Therefore, I have purposely sidestepped these cases. I have operated on very few loose kidneys. One I did I was sorry of, in whom I had performed a gastro-jejunostomy with drainage of the gallbladder. I said I will first fix your stomach, and if the symptoms continue I will relieve you by fixing up the kidney. I did that in Decemer last. When we got through she was perfectly miserable in the hospital for two weeks, but latterly she is coming around all right. Whether I do the operation exactly right or not, I don't know. Another point with reference to swinging the kidneys from the lower ribs. Remember that the pleura on the right side frequently extend as low as the lower ribs.

V. A. Dodd, Columbus: With reference to the indications for fixation of the kidney, I think pain is one of the most important. I do not believe in fixation for so-called neurasthenic symptoms.

F. E. Bunts, Cleveland, reported a case that was operated on seven years ago for appendicitis, and developed a ventral hernia following operation. The patient also had a movable kidney, which

later came down into the hernial sac, making a second operation necessary.

Dr. Bookwalter, Cleveland: It is now twelve years since I had occasion to see a case of floating kidney on the left side in a child seven years of age. This little girl was unable to speak. The only sound she could utter was a guttural sound. On examination I found a general splachnoptosis, sweating of the body on the least exertion and a constant enuresis. I mention this case because the treatment and general result will contradict the statement that plaster bandages and other supports are of no value. On the contrary, I expect to show that so far I have never had to send a case to the surgeon. Now in this case I took the kidneys and lifted them up into their place and bandaged with plaster bandages first one centrally, lifting up the abdominal wall while fastening the lower end against the back bone, and then two sides, always lifting up and supporting them as they went, holding the kidney above in place above the colon, and in that manner I bandaged across onto the spine, and then one or two pieces transversely from hip to hip in the region of the groin to prevent dragging on standing. In three weeks' time her general condition was improved; she could play around; in six weeks her tongue began to protrude a little, and at nine weeks she could begin to say A B C, and in the course of nine months she was speaking English and German and going to school. After the first bandage the genito-urinary symptoms ceased. Beforehand it was difficult for her to retain her urine on account of pressure on the bladder. The child went around with those bandages. Finally she had no bandages only when she walked. One day the family sent for me and said the child had inflammatory rheumatism. On examination I found the left kidney had come down, pressing on the nerves. The pain in the left leg was extreme, and was relieved by placing the bandages on again. After one or two years the child at school was not allowed to go out, and she immediately felt something give way and felt the same pain as before. Again the kidney was down, and with the proper bandages she was immediately relieved again. Now I haven't seen that little girl until six months ago. She came to my office a young woman, in the best of health. Since that case I have had others not quite so bad. I am positive I can say we don't need to resort to surgery except in the very extreme cases.

R. E. Skeel, Cleveland: With regard to Dr. Haines' remarks, I described the ligament as holding the kidney up instead of a support, so I think I was entirely right. I was very much interested in the X-ray discussion and should like very much to see that carried out. I think I remarked during the paper that the mobility of the kidney was more often the cause of the pain. I don't operate upon every case of movable kidney. I "sidestep" them nine times out of twenty. I think the use of an abdominal adhesive plaster will hold the kidney in place.

Dr. Lichty: I haven't anything to add, except I think the floating kidney has scared the laity a great deal more than is necessary, and part of the scare has come from the medical profession. I

don't wish to blame them, but I think it is time to quit.

Dr. Smith: One or two of the gentlemen spoke about the stitch in the kidney being a positive menace to life almost. I don't quite understand how they come to that conclusion, for every man who is doing kidney surgery has to open a kidney once in a while, and he puts stitches into that kidney and does no harm. I don't see how absorbable material in the kidney will do any harm; it is taken up in eight or ten days. I am glad Dr. Lange brought out the importance and the benefit of the X-ray. My paper yesterday in enumerating the indications for nephrectomy I referred to the X-ray as an aid to us. Dr. Keller spoke of the help and benefit to be derived from catheterizing a kidney in diagnosing a movable kidney from a diseased kidney. Well, you are going to fix the kidney anyhow, so what is the use of subjecting your patient to this unnecessary examination? There is quite a diversity of opinion as to the size of the renal pelvis. It varies all the way from 8 or 10 c.c. to 50 or 80 c.c. Freeman of Denver a few weeks ago published an article in which he said it was 50 c.c., and Harris of Chicago says it is 80 c.c.

HYOSCINE HYDROBROMIDE AS AN ADJUNCT TO COCAIN ANESTHESIA, AND AS A PREVENTIVE TO COCAIN POISONING.

MYRON METZENBAUM, B. S., M. D.,
Cleveland.

[Read before the Ohio State Medical Association, Toledo, 1910.]

Hyoscine hydrobromide, or scopolamine, is found with atropin, and, according to Hare, it resembles atropin, physically, chemically and physiologically, and can be readily converted into it.

I consider it physiologically as though it was made of two radicals, the one similar in its action to *atropin*, excepting that it does not check the kidney secretions; the other radical similar to *morphine*, to which can be attributed its hypnotic properties.

Hyoscine hydrobromide, or scopolamine, can be given to adults in doses of 1/200 gr., by hypodermic, and 1/100 gr., by mouth. To this dosage, few will show any idiosyncrasy. The double of this quantity is considered the physiological dosage. Just as some persons are susceptible to even minute quantities of belladonna, and hyoscine being similar, some will be unusually susceptible to it. When such is the case, excitation occurs, and may develop into hallucination, which condition is only annoying. To febrile patients, it acts as an excitant instead of a sedative.

The dosage to children is proportionate to

their age. They tolerate the drug very well, just as they do belladonna.

According to Kochman, Wood, and others, hyoscine, like belladonna, when administered in physiological doses, either by hypodermic, or by mouth, produces a dilatation of the vessels of the skin, a paralysis of the nerves to the secretory glands, checking their secretion, causing a dryness of the mucous membranes, and lessening their absorptive power. Unlike atropin, it does not lessen the kidney excretion.

The animal experiments of Crile and Cushney prove that hyoscine, like atropin, blocks the vagus nerve and the heart ganglion themselves against reflex stimuli coming through the vagus directly, or reflexly through the superior laryngeal nerve or its branches, thus preventing dangerous slowing or stoppage of the heart from "vagus inhibition."

The practical application of hyoscine is its administration to patients preliminary to performing intubation, tracheotomy, bronchoscopy, goiter removal, or any extensive operation within, or about the larynx, trachea, or deep structures of the neck and upper thorax, where tracheal pressure, or manipulation of the vagus, the superior laryngeal or its branches is reflexly liable to cause a sudden stoppage of the heart.

According to experimental researches of Sollmann, hyoscine, like atropin, is especially valuable in preventing dangerous slowing or stoppage of the heart during the first stages of chloroform anesthesia. In ether anesthesia it holds in check the salivary and bronchial secretions.

Hyoscine, administered one-half hour before an operation to be performed, either under local or general anesthesia, quiets the patient, benumbs his sensibilities and lessens his irritability. His anticipation of fear is nearly gone. His cerebral excitement abolished. His nervous dread and psychological fear almost entirely removed. He is partially anesthetized, requiring less anesthetic. His vagus nerve and heart ganglion are insensible against inhibitory stimuli coming either from the general anesthetic or from the surgical interference through the vagus nerve and its branches. His mucous and bronchial secretions are held in check. If a general anesthetic is administered, he does not swallow quantities of mucus, which provoke choking and vomiting both during and after the operation. The analgesic effect is lasting, so that sleep follows the anesthetic.

The patient being partially under a general anesthetic, therefore requires a less quantity, and a weaker strength of cocain solution to complete the anesthesia of any particular part. Hyoscine having caused a temporary paralysis

of the glands of secretion, and a vaso-motor dilatation of the peripheral vessels, general absorption is lessened, therefore the applied solution of cocain is more effective, and not being readily absorbed, there is less possibility for toxic effects.

Since 1901, I have given hyoscine hydrobromide over 600 times, before administering a general anesthetic. R. A. Rice, the professional anesthetist to the Grant Hospital, Columbus, has given hyoscine 7500 times before administering general anesthetics. Crile has used it 2000 times before operating under gas, chloroform and ether. Von Eiselsberg, Vienna, has it given routinely for the past three years, preceding general anesthetics.

Personally, I have given 1/100 gr. hyoscine hydrobromide by mouth over 800 times, preceding operations under cocain, after which I use 1-1000 to 1-5000 strength cocain for infiltration, and never required over 2% solution for operations upon mucous membranes, such as submucous septal resections. The patients prepared with hyoscine are minus the usual fear, always in good condition, and due to the lasting effects of hyoscine, are free from pain for several hours. Experimentation shows that after injecting warm-blooded animals with 10 mg. hyoscine hydrobromide, producing an inhibition of the vagus and cardiac ganglion, the strongest Faradic current had no effect on the animal's heart.

While there is no real chemical or physiological antidote to cocain poisoning, hyoscine, like atropin, *possesses antidotal properties, when administered before the cocain. Hyoscine is antidotal against cocain in those cases where cocain poisoning arises unexpectedly, where the cocain is being given in what is considered physiological doses. Hyoscine hydrobromide retards the effects of cocain on the heart, until cocain is introduced in such quantities as to poison the heart muscle itself, producing a paralysis.* A series of animal experiments are now in progress, pointing to further evidence of the antidotal properties of hyoscine against cocain. These results will be given shortly.

768 Rose Bldg.

DISCUSSION.

Dr. Fry, Cleveland: This is an exceedingly interesting paper to any one who does any nose and throat work. I have two questions I want to ask. One is the effect of hyoscine on hemorrhage, as it dilates the arterioles and capillary vessels; it would strike me as possible that you might have more hemorrhage as the result of the administration of it.

Certainly in the use of cocaine, which all specialists use daily, I presume everyone has some very unpleasant occurrences so far as fainting at-

tacks are concerned. Although I never had a death from cocaine, I have had a good many people who exhibited very marked heart symptoms.

J. A. Thompson, Cincinnati: I should like to say just a word on the subject of hemorrhage. In Christ's Hospital, in Cincinnati, we tried out very thoroughly the scopolamine and morphine preliminary injection before anæsthesia. We abandoned this technic very soon on account of the excessive bleeding that followed the operation.

Dr. Metzenbaum (closing): Hyoscine, as I wish it used, is not only in its physiological dose, but slightly less, therefore it will not prove toxic. I condemn the use of hyoscine and morphine as a general anesthetic for there occurs a complete and almost a lasting paralysis of the vaso-motor system. This is very different from what follows the administration of a physiological dose of hyoscine in which there is simply a temporary dilatation of the blood vessels. In the use of physiological doses there is *less hemorrhage*, because there is a general distribution of the blood, and hence there will be less flowing at the point of operation. This is by analogy the same as the use of nitroglycerine in cases of pulmonary hemorrhage, where the increased distribution of blood over the entire surface of the body rids the lungs of the usual amount of blood.

THE SOCIAL AND ECONOMIC VALUE OF EFFICIENCY IN MEDICINE.

BY F. PARK LEWIS, M. D.,
Buffalo, N. Y.

[Read before the Second District Medical Association, Springfield.]

Every great public movement has been preceded by a period of general unrest. At such times, the under current of feeling which is present may manifest itself in widely different ways. It may be shown in a religious upheaval, or in economic disturbances, but the emotional or intellectual sentiment which is stirring the hearts or minds of the people is in each instance the same.

It is through such a condition as this that we as a nation are now passing. There has been a general awakening of the public conscience, an enlargement of the sense of public duty and responsibility and an open-minded receptiveness to all essential truth. We are outgrowing our intellectual provincialism and are rapidly coming to realize that we are not alone members of a little community, but are essential integers of a nation. From this has come a spirit of inquiry in politics, in science and in social life and with this a new determination which is an inspiration to better the conditions under which we live.

Happily our own profession has been among the first to feel the effect of this spirit of the time and

has established a new series of relationships between itself and the public. The narrow, individual, and sometimes commercial viewpoint of doctor and patient has been broadened and enlarged, become more altruistic, more far reaching—and a new philosophy of medicine has been evolved. A new department has been created which has for its object the protection of the public health. During the last two decades, medicine has been rewritten and while individual practice is infinitely more successful because of these broader studies, our work today deals less directly with the cure of disease than with the control of the causes which make disease possible. Because then, of the general and intelligent sympathy with which a like minded public view our efforts for an enlargement of our professional scope, we may be assured of encouragement and help in every well considered movement for the public good.

Great, however, as has been our success in the field of preventive medicine, the outer edge of possibility has but just been touched—and the time is so opportune and the necessities so urgent for a general movement for the protection of the people against certain subtle and destructive influences which are actually undermining our social fabric, that it is my purpose this evening, to endeavor to show what we as a united profession might accomplish by concerted action for the general uplift of humanity.

As a people, we are optimists; we generally believe that we are a strong, intelligent progressive nation with a great future. We especially pride ourselves upon our business shrewdness. It comes with something of a shock, therefore, when one of our greatest engineers—a man most thoroughly conversant with public affairs, tells us that our big industries are run with a degree of wastefulness that amounts to absolute profligacy. "The managers of our great industrial corporations and railroads," says Mr. Harrington Emerson in a notable article in the *Engineering Magazine*, "are men of great force of character, of stupendous ability, of untiring energy, devoted to the interests entrusted to them; but because they know only empirically what the principles of efficiency are, because even empirically they apply these principles only spasmodically, the plants and railroads whose well-being they are so eager to further, are operated wastefully beyond belief. The losses in American railroad operation alone run to a million dollars a day—losses preventable through the recognition, acceptance and persistent application of efficiency principles; losses as preventable as yellow-fever deaths at Panama."

If this be true when large personal financial interests are involved and when great expenditures

of money are made in order that the highest skill may be secured, how stupendous must be the losses to the nation in the needless destruction of human life and in the debasement of human energy, when almost no effort whatever is made to enlighten the public concerning the most vital facts of existence.

I wish then to emphasize—what doubtless those here realize—that of all of the conservation movements, none begin to compare in importance with those having to do with human life and human energy—that we are wilfully ignoring the existence of certain demoralizing and degenerating influences which are lowering our effectiveness as a nation and that measures for the control of these conditions must originate in and be determined by the medical profession because only to practical physicians are its dangers and its tendency known.

In order that my meaning may be clear, let me indicate what I wish to be understood by human efficiency. If it were possible to imagine a combination of all grades of people, so that each would have the same qualities, aptitudes and abilities as the others, the resultant would be the composite man. He would not, however, be the "average man" as we know him. The average man is one who is physically normal, who has all of his sense reasonably well developed and who is able under ordinary circumstances to meet the usual requirements and responsibilities of life. If in the melting pot we were to put what we know as the average and were to add to it those who possess special physical or mental gifts, the betterment would be almost inappreciable. But if to this mass we add the multitude of defectives and degenerates, those imperfectly formed physically and mentally, the whole of the submerged tenth and all but submerged quarter, the result would be a product unable to maintain his position in the struggle for life. It is as if to a grey mixture one were to add a little white it would still be almost as grey as before; but if to this he were to add a little black, the change would be so marked that the mixture would at once assume a blackish hue. It is far easier to drag humanity down than it is to lift it up. It is as important therefore to the man on the street that the highest possible average of all good qualities in humanity be maintained as it would be if he were to share in the general product, since it is evident that the weaklings and parasites of society must be supported by the paid workers and wage earners.

The price paid by the State of New York in the last year for the luxury of having an army of criminals and paupers, lunatics, idiots and epileptics amounted to a grand total of ten million dollars. Think of the burden which this entails on the honest citizen who by his utmost endeavor is

barely able to make a livelihood for himself and his family. If it were possible then to limit the production of these undesirable citizens, by replacing them by those of a higher grade, the importance to the working man and to those upon whom their support falls is so great that it may be actually vital.

There is no doubt whatever that if right measures were employed and suitable conditions obtained, it would be possible to limit by one-half the preventable forms of degeneracy. This, by making producers where are now consumers, thereby increasing the general production and lowering the high cost of living, would so lift the economic burdens that the workingman instead of having to struggle for a bare existence, might live in what to him would be a condition of luxury.

The conditions obtaining in the State of New York are fairly representative of those in other parts of the country. The greatest expense is for the maintenance of criminals in prisons, who are not permitted to work because their labors would interfere with honest workmen, the blind of whom between four and five hundred are maintained at public cost, with a vastly larger number, the recipients of public or private charity, the idiots, the epileptics, the insane and vicious.

We decry the burden of militarism in Europe, and pride ourselves that we are not impoverished by maintaining an army in idleness, while we have in fact a greater army of incapacitated citizens whose value as productive factors has been lowered or lost than the standing army of any country in Europe. The chief cause of all forms of degeneracy have been relegated as a result of intensive study by competent specialists to inheritance and environment, and disease. The first two are often the consequence of the third. The chief causes for the disproportionately rapid increase of insanity and degeneracy are alcohol and syphilis. The former has become such a serious menace to the nation that many of the states, especially in the South, have taken vigorous action for its control, and it would seem that the time has come when every state must invite a conference of its wisest advisors in order that measures may be taken to protect its citizens from those who prey on their weaknesses.

The results of the infectious sex diseases have become so widespread that they threaten the physical and moral integrity of the whole people, the danger being immensely augmented by the prudery which prevents open discussion of them. Yet if the same principles of efficiency were employed in relation to this medico-social problem, that would be applicable in the reconstruction of a great business that had been conducted extravagantly, the

immediate results would be an uplift of unimagined magnitude.

Robert C. Ingersol once rather flippantly said that if he were God he would make health catching instead of disease. It is just as possible, as Mr. Burbank has shown by the application of scientific principles, to develop the good as the bad.

Frankly stated, as we all know, the underlying causes of degeneracy are syphilis and alcohol, directly or by inheritance, while to gonorrhœa is due at least one-fourth of the blindness of babies. Yet, the stupid and silly policy of ignoring all sex questions in education has made it impossible to warn the youth of the land against the dangers which they are obliged to meet. Is it not fully time that we who know its necessities, insist upon the teaching of sex hygiene to the adolescent? There is no subject more alluring than that which is forbidden. When mothers tell foolish fables to intelligent children, concerning life processes, they will naturally seek information elsewhere, and the sources are usually unclean.

We would be amazed could we hear them, at the secret conversations of children of immature years, at their filthiness and by the pictures conjured by their imaginations and which find expression in slyly written or carved indecencies in public places. We continue this policy of ignoring existing conditions even when early manhood has been reached. We fail to instruct our young men and women in normal sex physiology, and they learn it often at the expense of character, health and even life itself.

Dr. Arthur T. McCormack of Kentucky recently asked the physicians of that state to report to him all cases of gonorrhœa met with in their practice. All did not respond, but in one year, thirty thousand cases were reported in a population of two million souls. Dr. E. H. Porter of the health department of New York State recently said that if he could give four talks to each of the school children of the state, one-fourth of the brothels would close from lack of patronage. He is assured that a large proportion of sex disease is due to ignorance. If this is true, then no expenditure of time or money is too great to obtain such results as he predicates.

More obvious is the immediate consequence of gonococcal infection in infantile ophthalmia. Here our responsibilities are more direct. Every child has the right to be well born. It is the duty of those responsible for its welfare to see that neither its life or eyes are needlessly jeopardized. It has been estimated that it costs the State of New York \$110,000 annually for the maintenance of those made blind from this disease alone, one of the almost absolutely preventable forms of blindness. I

believe that the time is rapidly coming, even if it is not now here, when those who fail to protect the child from such a condition as this, after having assumed responsibility of so doing, will be made to answer for it.

We doctors occupy a peculiar position of responsibility toward the public. We know at first hand the terrible effect of syphilis and gonorrhœa on society. People generally do not. It is, therefore, imperative that we initiate such measures as will tend toward their control. First, to secure in our public schools, through our educational department or our department of public health, or both, judicious and proper teaching of the hygiene of sex and the dangers of sex diseases. Second, to carry into effect in every county in every state, the recommendations of the committee on ophthalmia neonatorum of the American Medical Association. We can eventually eliminate ophthalmia neonatorum as a cause of blindness, but only by concerted action, and we could thereby conserve to the nation as useful citizens hundreds of those who through their blindness must become dependents.

It is not alone in our public schools that wider education is needed, but our adult citizens have a right to know and should be taught through public lectures and such other methods as may seem practicable the essentials of personal hygiene.

The second method by which the medical profession can enormously raise the efficiency of humanity by concerted effort is in aiding the movement for the medical examination of school children. The importance of correcting physical defects in the young is now so well known that it is not necessary for me to point it out. Even the intelligent layman understand that the removal of adenoids and nasal obstructions, the correction of eye defects and other impediments to the free action of the mind or body often at once lifts the child from a low to a medium or high grade of mentality and thereby increases his efficiency to that degree. I mention this phase of the medical work only that I may emphasize two points in connection with it.

First. The necessity of seeing that the defects are corrected after having been pointed out. In Cleveland, as in New York, it was found months after the children had been examined and defects had been reported, that nothing had been done to remedy them, and, of course, the efforts made in gathering the facts are worthless unless followed up. In both of these cities, the departments of public health has, by personal visitations and by urging the parents, succeeded in having the things done that were recommended, and a very large number of children, before then retarded, have been able to do their work because of the relief

thus obtained. It is very evident that from a financial standpoint this has been a wise procedure on the part of the state because if by raising their efficiency, we shorten the period of school life, we thereby, proportionately lessen to that degree their educational charges. This would average thirty dollars for each child for each year of school work saved, to say nothing of the increased possibility of making them more effective citizens by reason of their bettered mentality.

But the second point is one not so commonly recognized and which is of almost equal importance. It is the saving by the same methods, of the residuum of humanity, the development of a by-product into valuable material. I mean by this, the waifs who have corrigible physical defects, the relief of which makes them useful members of the community.

The superintendent of the poor of Buffalo is a man of unusual common sense and feeling for these poor little outcasts of society. In every instance, he has them carefully examined by expert specialists, who gladly volunteer their services, as to physical conditions before determining what should be done with them. The results have, in many instances, been most interesting. Frequently it is found that a child is vicious, stupid or untrustworthy because of physical conditions which ought to be corrected. Of course, the environment is often not good, and many of these so-called bad children, when made physically normal and put under proper social conditions have been found to be fully able to maintain their position as useful members of society. From one to eight of these are under observation continually, and every one of these restored to usefulness becomes an asset instead of a liability in society's account book.

Does not such work raise the practice of medicine far above the sordidness of commercialism and make it truly a profession of which we may well be proud?

The third method by which we as medical men can raise the standard of public efficiency is by making more widely understood the new science of Eugenics. In our state schools, as in all public institutions of like character, the largest proportion of cases we find described as due to heredity. These cases are almost invariably incurable and consist of degenerate changes in the eye structure. Almost always they are combined with some other form of physical or mental defect.

Of late years it has been the custom in public institutions to make inquiries in regard to the ancestry of such children and most startling facts have been elicited by these investigations. For instance, it has been found that many of these chil-

dren come in family groups. In other words, that a past heredity is perpetuated. In sixty cases of congenital cataract examined by Dr. J. E. Brown of Columbus at the Ohio State School for the Blind, seven groups of relatives were found.

In the New York State School for the Blind, there is now a little girl who represents the fourth generation of blind people who have been educated at the expense of the state. Two pupils of the school early in its history, when segregation was less practiced, became acquainted and after leaving school married. The blind progeny, the results of this union have been coming back to the state for support from that time until now and will continue to come back, heaven only knows how long; because every defect so started goes on in arithmetical progression perpetuating a defect which makes its possessor almost absolutely dependent upon state or private aid. Another blind child, suffering alike affliction is an offshoot of an allied branch. The number of blind people who have resulted from this single family is already over twenty. In another instance, the seventh generation is represented. One of the older members of the family naively tells us that the blindness was originally brought upon the family by reason of a curse. Its perpetuation through family after family is unquestionably a curse, both upon them and upon us upon whom the burden of their support must necessarily rest.

The children of alcoholics and idiots, of lunatics and feeble minded are as inevitably degenerates as are those sound and sane who have ancestry which is strong, clean and intelligent. From the report of the Letchworth Village which has recently come to me, I quote the following:

Emma W., illegitimate child born in almshouse; feeble-minded. Mother, two brothers and a sister feeble-minded; mother's father feeble-minded and mother's mother tuberculous. When a second child was expected, the mother was induced by well-meaning people to marry the father, who was a drunken epileptic. Two children were born. Still later the same well-meaning people aided her to get a divorce in order to marry the father of another child about to be born. Since then four more have been born. All of these children are feeble-minded. This entire family, with the exception of the oldest child, are at large.

The responsibility for this is not upon the poor idiot girl, but it is upon the sane and intelligent people who permit such things to occur. When we read of records like this, it is not surprising that we find such a proportion of weak-minded people at large as is illustrated by the chart published in the Twentieth Annual Report of the New York State

Commission of Lunacy, which graphically shows of the 20,000 feeble-minded and epileptic in the state, 14,500 are at large, but 3500 in state institutions and 2000 are in almshouses. Nor is it a matter of surprise that we are obliged to form special classes in our public schools and even special schools for the mentally slow.

I doubt very much if one graduate in a thousand from our public schools or even from our colleges has the slightest idea that idiocy is anything other than a purely accidental occurrence. And yet so thoroughly are our people becoming infected with these forms of degeneracy, so rapid is the increase in insanity that economists are looking upon the care of those defectives requiring state supervision as one of the most serious problems with which we have to deal. Far more serious is the lowering of physical, mental and moral fiber of our citizens. While those that may be counted and classified represent the extreme instances and lower grades of degeneracy there is a vastly larger number who constitute the cranks and crooks and eccentrics and yet who share with us the privileges of government. Is there then any more important duty which rests upon us than to take such measures as may limit the production of this dangerous class of undesirable citizens by the use of such common sense as must appeal to every one.

But if we are to accomplish these great things for the benefit of humanity, the medical profession itself must coordinate its work in a more definite and orderly way. It must work with and through the department of public health. Individual physicians should be willing even at the sacrifice of some little personal convenience to bear their share of public responsibility by heartily cooperating with the public health department in its requirements. Births, deaths and communicable diseases should be promptly and accurately reported. Measures should be taken whereby our hospitals and dispensary reports should mean something. I am this day in receipt of an inquiry asking how much blindness is due to syphilis, and I am unable to say because not one of our public institutions make records that are at once accurate, complete and immediate. This could be taken up by our district and state societies and a higher degree of statistical efficiency secured.

But all of our efforts must be spasmodic and these great humanitarian movements kept back until we secure a department of public health at the seat of our federal government. Then these larger policies may be broadly considered and general educational measures introduced which will make practical much for which we can now only hope. Individually and as organizations we should

employ every possible means to secure congressional favor for this movement, for through such a department we hope to secure the most comprehensive, far-reaching and effective work for the uplift and benefit of humanity.

MEDICAL INSPECTION OF SCHOOLS.

JUNIUS H. MCHENRY, M. D.,
Cleveland.

[Read before the Ohio State Medical Association.]

The subject of medical school inspection dates back to the twelfth century when physicians visited schools from time to time as sanitary inspectors. But little progress was made, however, until the nineteenth century. It is said to have existed in Poland 120 years ago. In France in 1833, 1837 and 1842 laws were passed relating to school physicians. Further, in 1874, weekly medical inspection of schools was instituted in Brussels, probably the first system in the full modern sense of the term, and within the next twenty years Austria, Germany, Hungary, Holland, Sweden, Switzerland, Russia, Spain, Japan, the United States and Great Britain followed.

What the eighteenth century established for man and the nineteenth for women, the twentieth will establish for the child. In the light of today's philanthropic agitation and effort, and the present trend of legislature enactment, we may confidently predict that this country will direct its chief efforts and realize its most vital accomplishment in the interest of the child. Here the principles of liberty, in the case of the child—freedom—freedom from handicaps of birth, from unhygienic and immoral environments, from degrading tendencies of industrial enslavement.

The state is more and more assuming paternal supervision of the child: Witness, for instance, the child-labor and compulsory education laws, the juvenile courts with coercive power over the parents, and laws requiring medical inspection of all pupils in public schools.

The two vital questions are, therefore:

I. What can medical school inspection accomplish for the pupil? Considering eye and ear affections alone, and omitting all other conditions and diseases, it can remove these chief handicaps to the obtaining of a common school education and can lay the foundation in physical health for the future years of study and the practical duties of life. The other question is: II. What can medical inspection do for the public? It can and will reduce, marvelously, the prevalence of contagious

diseases and the mortality therefrom. Medical inspection of schools is a marked stride in modern sanitation and education, for it means establishing and preserving the health not only of this, but also of the coming generation. The master word of modern sanitary science is "prevention."

The lengthening of the school term and the increase in the number of years of study demanded has brought with it a great advance in the standards of work required. When standards were low the work was not beyond the capacity of the weaker or less intelligent children, but with the fuller course, keener competition and increasing demands for intellectual attainment many pupils have been unable to keep up with their grades and a class of physically and mentally backward or defective children has been created. The system of mass education, which can give little attention to the individual and which endeavors to place on the same plane children of varying qualifications and ability, has contributed to this class.

The assumption by the state of the right to compel, for its own safety, the education of its future citizens, implies that the child is mentally and physically fit to be educated and this assumption should carry with it the responsibility of requiring that if the child is not fit the educational processes shall be so changed and adapted as to insure the largest possible degree of physical as well as mental fitness.

Without such requirements the state is in the position of compelling its future citizens to submit to a process which endangers their physical welfare. In the words of Dr. W. H. Allen: "When the state for its own protection compels a child to go to school it pledges itself not to injure itself by injuring the child."

It is evident that if the school process has an adverse physical effect upon the child, it can in turn be shown that this physical unfitness renders him less able to master his school duties. While the presumption of physical fitness in respect to children of school age may well have been assumed without question, previous to the present generation, it is a startling revelation of recent investigations that the majority of school pupils are not fit to profit to the fullest extent by their educational opportunities.

Dr. Thomas F. Harrington, former Supervisor of Physical Training in the Boston public schools, says: "Science today has proved conclusively that the blunting of the moral sense has a distinct anatomical or functional stigma which in many cases is removable. Few teachers in cities where attention to defective eyes, throats and ears has been directed have failed to witness the transformation, mental, physical and moral, following

the correction of refractive errors, the removal of adenoids causing deafness or oxygen starvation and abnormal metabolism."

A short time ago 134,000 children were examined by the Board of Health in New York; of these, 66% needed some treatment for physical defects. Of 600 children examined in Edinburgh, 70% were found to need treatment. While a report comes from Philadelphia that only 12% of the children examined there may be considered normal.

Great changes have come over American life; we are no longer an agricultural people, but have developed into a race of dwellers in towns and cities—33% of the population live in cities.

Of great importance, also, is the change that has taken, and is taking, place in our racial stock. This is important because standards of living, of cleanliness, of freedom from vermin, are being brought in by recent immigrants which are not only different from those that obtain under early American conditions, but which are inimical to those higher standards of life that are essential to the individual in a democracy that is to endure. That this is a real and large factor is shown by the following figures taken from the last census:

City	Percent of Foreign Parentage
Milwaukee	82.7
Chicago	77.2
New York	76.6
Cleveland	75.5
Boston	71.6

The school year is now ten months of five hours a day, as a rule. The number, too, of years of school life has increased. So the schools in their intimate commingling of children from practically all families for most, if not all, of the year, afford by far the most extensive means that exist for the spread of contagious diseases.

Before any systematic school inspection was instituted, it is an undoubted fact that large numbers of uncontrolled cases of contagious diseases were to be found in school rooms and the contagious element was widely disseminated by the close contact of the children in the class-room and playground and the commingling of their hats and wraps in the cloak-rooms.

The fact that the communicable disease rate immediately falls at the close of school in the summer and that it is always low during and immediately after the Christmas vacation, indicates that there is no surer means for the spreading of a communicable disease than the schools.

Besides the contagious diseases, which are in reality and after all the minor disorders, abnormal conditions, such as one may find in the eyes, ears,

nose and throat, exist in an enormous percentage of school children, as has been shown.

It is a truism that much of disease, pauperism and crime appearing in after years is due to influences operating during the period of school life and much of it can be avoided by early discovery and proper care of physical defects.

Many a dull, listless inattentive pupil, whose scholarship is below the standard, is pushed by both teacher and parent to do work for which he is physically incapacitated by reason of enlarged tonsils or an adenoid growth preventing that child from receiving the proper amount of air and thereby oxygen into his system.

Likewise important are certain eye troubles which should be corrected as soon as possible. Many an acute eye disease, when taken early, will amount to nothing, but if allowed to continue untreated may prove a life-long source of regret and impairment to the child.

The subject of medical school inspection as a regular system was first taken up in the United States by the city of Boston in 1894, followed by New York in 1897, Philadelphia in 1898, Chicago 1900, and so in, in 1906 it was inaugurated in our own state in Cleveland.

The Board of Health then appointed twenty-six physicians whose duties were to attend the indigent sick and to inspect the public and parochial schools in their respective wards. Every inspector was required to visit each of his schools every other day. The duties of the inspectors were to examine and exclude from school any child having a contagious or communicable disease.

All children showing symptoms of measles, scarlet fever, diphtheria, whooping-cough, mumps, chicken-pox, or small-pox, are sent home. Cultures are taken in all cases of sore throat in which diphtheria is suspected. Further than this the work was purely optional with the inspectors.

It was the duty of the teachers to send such children to the principal for examination by the inspector when he calls. Besides this there was a room to room visitation by the inspector from time to time to discover anything which may have passed unnoticed by the teacher.

The amount of work to be done in the respective schools varied greatly. Schools located in the congested or "foreign element" districts presented problems totally different from that found in the schools situated in the more select residential portions. When one considers the home conditions of these pupils in the crowded tenement districts, it is no wonder there is disease, the wonder really is, that there is not more.

The number of communicable diseases such as impetigo-contagiosa, tenia, scabies, pediculosis,

etc., was so great that the inspectors found that merely excluding the child, notifying the parents of the cause and requesting them to take the child to their family physician, was not sufficient. The child would remain out of school several days and return in about the same, if not in an exaggerated condition. The excluded child would likely be just the one who most needed the influence of the school-room. The inspector had, therefore, accomplished nothing. Knowing how amenable to proper treatment such diseases were, he soon found himself washing off the lesions, removing the crusts or scabs and applying the ointment himself.

The importance of getting results in this kind of work naturally resolved itself into a question of economics. If education is compulsory and communicable diseases are to be excluded, what is the solution of the problem? It may be interesting, therefore, to read a report to the Director of Schools from a principal of one of these schools of the foreign element district, which is as follows: "The law of the Board of Health excludes from school, children suffering from contagious and communicable diseases. The following were examined and treated by the Medical Inspector and would have lost a corresponding number of days from school by being excluded, but by instructions and treatments were allowed to remain in school.

This from January to June, 1909:

118 conjunctivitis	@ 5 days	590
30 scabies	@ 5 days	150
25 ringworm	@10 days	250
90 pediculosis of head.....	@ 3 days	270
20 pediculosis of body.....	@10 days	200
95 impetigo	@ 5 days	475

1795

We have 184 school days this year, so about ten years of schooling was saved to the Board of Education, the economics of which is obvious."

The importance of these facts caused the Director of Schools to employ nurses to assist the inspectors and to carry on this work, thereby actually saving money for the Board of Education.

In this way, therefore, Cleveland met this demand by establishing "Inspection Stations" at four or five schools located in these congested districts.

A graduate nurse of the Visiting Nurses' Association is in charge of the inspection station which is under the direction of the school inspector. It is her duty to look after the children who need treatment for minor troubles, the children continuing at school. After school hours the nurses are required to visit those children who were absent, on account of exclusion, and, when necessary, to

instruct their parents as to the best methods of treatment. As a result, 90% of the children that otherwise would have been excluded are enabled to continue in attendance and this has been accomplished without exposing any of the associated children to the dangers of infection.

The inspection stations are equipped with such appliances and instruments as are needed by the inspector for diagnosis, and such ointments, solutions, etc., as are required in the treatment of communicable diseases by the nurse.

Under no circumstances is it the intention of the inspector to treat children in these school stations except for such conditions as rightly come under the term of emergencies. They wish in no way to interfere with the work of the family physician but, on the contrary, to refer to him cases which, in all probability, otherwise would never come to his attention.

To anticipate and answer a direct question, Do school inspectors (or inspection stations) interfere with the physician's private practice in that locality? No; but they are frequently the means of bringing many cases to him which he would not otherwise see. In every case in which an abnormality in a child is found, the parents are notified and requested to take the child to their family physician. The nurse then "follows up" the case and reports on the home conditions of the child and the request is again urged.

A card record system is kept of all such cases, showing the results of the examination by the inspector and of the inspection of the home conditions by the nurse. These cards are intended to follow the child through its school life and the information is confidential for the Boards of Health and Education.

If the conditions are such that a physician cannot be employed by the family, the child is advised to go, or be taken, to a nearby hospital dispensary. If all of these methods fail and the case is an urgent one, it may be considered one of "neglect" and be brought before the juvenile court. It has been found, however, in these schools of crowded districts that parents are willing and anxious to do the things suggested by the school authorities for the benefit of the child.

The Board of Education has very generously supplied these stations with shower baths, soap, towels, etc. Cleanliness among school children is of tremendous importance. Parasites do not thrive where there is abundance of soap and water. The most careful and painstaking persons, in fact, the most cleanly, are sometimes affected, but that is a misfortune and not a fault. There is no disgrace in having a contagious skin disease. The disgrace lies solely in keeping it. It is said con-

cerning pediculi of the head, even with good treatment, "The inspector may come and the nurse may go, but the nits seem to increase forever."

On April 1st the Board of Education took over the responsibility of school inspection from the Board of Health. They have appointed a supervisor, fifteen inspectors and ten nurses. The Board of Health attends now only to the reportable contagious diseases. Their representative visits the school once or twice a week investigating any suspicious contagion referred to him by the school inspector or principal. A system of uniformity has been established and definite work will now be carried out.

The subject of dental inspection has also taken a definite position in our public school. The National State and Cleveland Dental Societies asked, and their request was granted, to put in four dental stations in different portions of Cleveland. All are completed and the work has started.

The object, of course, is to demonstrate this year to the Board of Education the importance in the care of the teeth and its relation to health and scholarship. The examinations last year by the inspectors found 90% of the pupils with defective teeth of more or less severity, a large per cent had never used or seen a toothbrush. That this plays an important role in the health of the child, with special reference to digestion and the general nervous system, there can be no doubt.

I feel confident the dentist will prove all that they now claim, and at the end of their demonstration the Board of Education will find that dental inspection must be included in this great work of medical school inspection.

My idea of going into details regarding the Cleveland plan is only to emphasize the fact that each city or town must be governed by the *local conditions*. To say that the Boston, New York or Chicago system is the best for another locality is obviously wrong.

The idea of "Inspection Stations" is, as far as I am able to learn, original with Cleveland. They have certainly more than saved the Board of Education in actual dollars and cents the money spent, when looking at it from a purely commercial basis.

The inspection in the schools may, therefore, be rightly divided into two classes. The first—is an inspection for contagious and communicable diseases which protects the community as a whole. The second—is one which will protect the individual child from physical deterioration, making the school process contribute to the physical welfare upon which the mental as well as moral development must depend. The first applies solely to powers invested in the Board of Health. The second more properly to the training, upbuilding

and education of the child and therefore to the Board of Education.

The question then naturally arises, should medical inspection of children of public schools be conducted under the direction of the school authorities or under the direction of a co-ordinate branch of the city government—the Board of Health.

Supt. W. H. Maxwell of New York says—I answer unhesitatingly that medical inspection of school children as far as it refers to preventing the spread of contagious diseases is properly the duty of the Board of Health, because that department alone is clothed with the power of quarantine.

So far, however, as medical inspection deals with physical defects and with building up the constitution of children through their school work, it will be most efficiently conducted under the supervision of the school authorities.

Dr. Gulick, Director of Physical Training, N. Y. Public School, in his recent work on Medical Inspection of Schools, says: "Two great forces have been making in America towards medical inspection of schools. On the one hand is medical science operating to protect the community through its boards of health, while on the other is educational science operating through the great school systems of the world and expressing itself through its more or less scientific departments of physical training."

The one is interested primarily in the health of the community, the detection and prevention of contagious diseases; the other in the education, health and development of the individual. The field of the one is the whole community, but especially the adult community; the field of the other is the school, especially the earlier grades of the school.

In order to gain the highest efficiency to promote the greatest benefit towards the welfare of the child, it is essential indeed that there should be the closest co-operation and harmony of the two boards. Whatever system may be inaugurated or wherever the responsibility for the administration may rest, the physical well-being of our future citizens means an uplift in their value to themselves and to the state. Moral and physical degeneracy are closely correlated. In correcting the one we necessarily tend to eliminate the other, and the ideal in view is that of giving our cities the highest type of mental, moral and physical citizen.

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207 Osborn Bldg.

DISCUSSION.

Dr. Hanson, Cleveland: In this field of work I remember the time when the teachers in the country districts were paid by subscriptions by parents of the pupils. Then later they were given a little compensation by the county, and after a while they got better pay. Later on they began to furnish books to pupils in all the schools in general and inspect the pupils' eyes and otherwise. Now we are looking after their teeth; we are inspecting the homes they come from, and all this has taken place in a few years. It is a question where it is going to stop or how far it is going and what improvements we can make. We certainly think the work done in this country and European countries named, is the biggest evidence we have of the amount of civilization. The better the conditions are provided for in school work, the better the children are fitted for work.

H. W. Nelles, Toledo: I consider this work very important. Every day in our practice we note cases among the children that need attention, and many times I have called the attention of the parents to the fact that the child had adenoids, or something of that nature. On investigation we discovered this was the reason for the child not doing well at school. In one or two cases we had instances where a tonsil operation had been done and in a short time the child showed considerable improvement.

Toledo is about to undertake this question of having school inspection.

Dr. Kopfstein, Cleveland: I wish to state that I enjoyed this paper very much, and would like to ask that in case a child is sent home who has large tonsils or adenoids, and the parents refuse an operation, must we report that case? The doctor says it is to be reported to the juvenile court authority and the juvenile court exercise the right in that case to tell the parents to have the operation done on the child. Adenoids or whatever the case may be is a menace to the child's health.

Another thing comes to my mind. How about the people who believe in Christian Science? Does it apply to them that they must be reported?

Dr. McHenry: Replying to Dr. Kopfstein, concerning where parents have been notified of some marked defect in their child, and no attention has been given such notices by them, I will say, if in the physician's judgment the defect is a menace to either the physical or mental development of the child, and by its correction the child may be restored to normal conditions, I certainly believe that such a case should be reported to the juvenile court for final action.

The other question "about people who believe in Christian Science, does it apply to them?" I see no reason why it should not, nor do I believe the court would be influenced by a "medical sect" in its final instructions in such apparent, urgent cases.

MALINGERING AND ITS DETECTION.

BY E. E. GAVER, M. D.,
Columbus.

[Read before the Ohio State Medical Association.]

Malingering, or feigning, or simulating, or "sogering" illness is not an extremely uncommon occurrence in a certain class of people who either desire gain or profit or to escape punishment. The soldier will feign illness to escape battle or duty. Some criminals will feign disease to escape conviction of their crime. Some criminals will feign disease to escape conviction of their crime. Other criminals will malingering in an attempt to establish a claim for damages. It is sometimes surprising how trivial the motives of the subjects are. You who have had general hospital experience will know the wisdom of being on the lookout for the tramp who desires the comforts of a hospital. There are lazy individuals outside the tramp fraternity who substitute some illness for their true condition. It is in the field of psychiatry or neurology that we encounter the majority of cases of malingering. There are some obvious reasons for this fact. The greater number of subjective symptoms a patient can assume successfully the better chance he has of making a case of himself. While in nervous diseases there are many objective signs it is true such diseases are rich with subjective symptoms. So this is the domain into which the malingeringer naturally drifts. I do not wish to deal with malingering of insanity in this paper. It may be well to state that malingering is divided into three varieties—exaggeration, substitution and entire simulation.

Exaggeration of disease is the most common endeavor. It is usually found in the functional diseases such as hysteria and neurasthenia. In the organic diseases there is sufficient pain without additions or exaggeration. It is not an easy matter to be just in all cases suspected of exaggeration of symptoms. The exaggeration may be without the consciousness on the part of the patient that he is misrepresenting. It is characteristic of most nervous cases to regard themselves in worse condition than they really are. Experienced physicians are often able to reliably detect voluntary exaggeration of symptoms without being able to make it plain to the second party or a court or jury.

The substitution of origin of a disease is very difficult to detect in a well-trained criminal. In this class of cases, an important class too, the subject is in nearly all cases fully conscious of the

fraudulent nature of their attempt. These cases more frequently make the attempt for gain instead of protection from punishment. Many corporations are now protecting themselves by requiring a physical examination of the new employee. Physical defects from a prominent basis for fraudulent substitution of origin. A defective eye, a scar on the head or back, or defective hearing commonly form the basis for claims. I recently had experience with a case who presented suspicious early signs of *tabes dorsalis* soon after which meeting with a rather severe accident involving negligence. An attempt to recover damages was made when the convincing symptoms of *tabes* developed. The injury was attributed as the cause of the nerve disease, although the patient was known to have been *luetie*. While it may be true that traumatism may be an exciting cause of a chronic degenerative disease of the nerves, yet in the above case symptoms had been noted previous to the injury.

Entire simulation is the real true form of malingering and is the comparatively rare form. Very few attempts to defraud by such means are now successful. Improved methods of diagnosis and specialization has practically eliminated the possibility of the success of a malingerer of a mental or nervous disease.

Usually the ignorant malingerer is easily exposed, but it is the more intelligent trained individual that baffles the alienist or neurologist.

The adventures of the Freeman family is a notable example of well systematized and studied malingering. The mother and two daughters made nine (9) different attempts to recover fraudulently from different corporations in Chicago, New York and Boston. On five of the nine occasions they succeeded in recovering money from the companies.

The records show that a newspaper reporter succeeded in feigning insanity for six months in the Bloomingdale Asylum.

The murderer Gilbert of France succeeded in deceiving the noted Esquirol and other alienists for a long period.

Since the enactment of the law in Germany by which payment to injured persons are made bases upon the earning capacity of the individual, that country has led all others in number of cases of malingering.

What we are most concerned about in the matter of malingering is its detection.

Most diseases of the mind and nervous system are now known to present a pretty well defined clinical picture and when a malingerer endeavors to act out and present a certain picture, even though he is familiar with its details, he has assumed a difficult task. He at once places himself

on the defensive, especially if he is confronted by a physician who is considerably more familiar with the disease feigned than he. He must keep on the alert always and at the same time remember and display the symptoms to one who is already suspicious. The array of symptoms in nervous diseases that are most commonly feigned are disturbances of vision and hearing, anesthesia, convulsions, contractions, paralysis, tremors, disturbances of gait, pain and hyperæsthesia.

For want of time we pass the visual malingerer by stating that any good ophthalmologist can expose fraud of this nature, and it usually devolves upon him to make the detection. In the claim of deafness, examination for structural changes in the hearing apparatus having been made and none found and simulation seems probable, the disclosure will depend on the confusion and outwitting the subject. An ordinary stethoscope is a useful adjunct in detecting any fraud of this nature. By connecting the stethoscope either branch of which can be separated at the will of the examiner, in the ears of the patient and operating from behind it is usually a simple matter to conduct sound to either ear singly or simultaneously and with ordinary cleverness in manipulation the operator will reveal hearing in both ears if it really exists. Light tapping on the diaphragm of the stethoscope is the means of producing sound that I usually employ. I find the ordinary watch tests are not so reliable. The subject is usually alert enough to detect the operator's movement and purposes with this test. Some cases may be placed off their guard when intoxicated or partially anesthetized. A good plan is to test the patient when asleep by attempting to arouse him.

In testing for feigned loss of sensation we must bear in mind the fact that most individuals can nerve themselves to the point of withstanding extreme torture when he is aware of its being applied. His defeat, however, is almost certain to follow the unexpected application of painful stimuli. The best means of making an exposure in this case is to blindfold the subject and use the faradic current, such an apparatus as you would use in testing for the reaction of degeneration. If the subject is so stoical that the ordinary unexpected electrical current fails to move him I would suggest that while apparently testing the reaction of degeneration and thereby further diverting the attention of the subject you suddenly prick the subject in the suspected area with some sharp instrument. The pain is so severe and the attention of the subject so thoroughly diverted that he is almost certain to reveal sensation if it exists. While making these tests the condition

of the pulse should be noted, as under pain it is usually accelerated.

It is a wise plan to first outline the area of anesthesia, if it is local, before the patient is blindfolded. After blindfolding the patient begin out on the sensitive parts and approach the line of difference and at the points where no feeling is noted establish a second line. Then begin your tests within the area of anesthesia and test outward the original lines and establish a third line where sensation is discernible. If the three lines coincide or even quite approximately are the same we may feel certain the anesthesia is real.

The examiner cannot be too cautious in dealing with the symptom of anesthesia as we well know it is a very prominent symptom in hysteria and of course an hysterical anesthesia is not to be regarded as fraudulent.

It is usually in an effort to play the part of an epileptic that convulsions are feigned. The chief hope of success in simulating epilepsy lies in being able to confine his exhibition of convulsions to individuals who are not physicians. Even many physicians who have not observed many cases of epilepsy may be easily deceived. An examination of the subject if he is a malingerer will not reveal the scarred tongue and head the result of injury. They are usually careful when and how they fall in an attack. While the convulsive movements may appear quite characteristic the pupils continue to react, and the reflexes are not lost as is true after a real attack of epilepsy. It is difficult for most simulators to avoid over-drawing the picture and become somewhat theatrical in manner. Sometimes the subject can be trapped by suggestion dropped by his physician that certain movements, really not a part of epilepsy, should be present. Such suggestion is often production of these movements in subsequent attacks. Attacks of hysteria are usually confirmed by the presence of other physical and mental stigmata.

Paralysis is one of the most common symptoms simulated. To successfully produce this system an intimate knowledge of nerve distribution is essential. Granting, however, an individual may study the subject sufficiently to know what group of muscles are supplied by a certain nerve it is hardly possible for him to limit his voluntary loss of power to that group alone and eliminate the associated movements. If a case before you is suspected of simulating a local paralysis it would be advisable to review your anatomy and physiology of the nerves of that locality before making the final examination. We should also remember that paralysis usually accompanies a group of other signs that are practically impossi-

ble to feign. Atrophy, changes in the reflexes, electrical reaction of degeneration, vasomotor disturbances. In proportion to the number of these attending signs is the probability of a paralysis being real. Should anesthesia accompany the paralysis the chances of its being fraud is considerably reduced as any shrewd malinger would not undertake to simulate two such difficult symptoms simultaneously.

We should remember the importance of constant observation in a suspected case of paralysis, as it is extremely difficult to maintain the quiet state of a group of muscles a very long period of time. Often such fraud is detected by outwitting the subject in the matter of observation. To illustrate, one of the members of the Freeman family alleged paraplegia. Before the expected visit of the examining physician, under observation through a hole in the floor of the room above, the subject was seen to get out of bed and place her feet in a tub of ice water that they might feel cold and exhibit vasomotor disturbances. It may be advisable as last resorts to use powerful faradic stimulation in case of flaccid paralysis or use ether to the exciting stage, or intoxicate the case with liquor. By invoking loss of control in these ways the subject may reveal his or her true condition. It is wise to observe if possible all suspected malingerers while asleep. Paralysis of the sphincter ani can be determined by digital examination as a loose patulous condition of the muscle is present in real paralysis. Alleged incontinence of urine requires only vigilant continuous watching for a reasonable period of time. It is rare for cases to allege paresis and and fortunately, too, as it is more difficult to expose than paralysis. The dynamometer is the chief aid in a case of this kind and its use is open to uncertainty. In using the dynamometer, however, keep in mind that if muscles are healthy or diseased the reading will be nearly the same on repeated tests except that there will be a gradual loss of power exhibited. Should the subject be feigning the reading will be quite irregular.

The simulation of tremor is quite difficult and should be fairly easily detected. Much depends on continued observation and so placing the parts that they will not be in contact with any resisting support. Seelingmuller's test is often useful. Place the subject on the belly and if he can press his toes on the bedding the tremor can be maintained, but should the legs be flexed at the knees the tremor ceases. The more irregular a tremor the less possibility of its being real. Tracings will be of some assistance.

Under cover of its being a subjective symptom pain is one of the most commonly alleged symp-

toms of the malingerer. There is no known means of determining whether a pain is real or fraudulent. Our judgment must be passed on weight of evidence afforded by accompanying symptoms or signs. Continued severe pain soon impairs nutrition and sleep, and of course, these conditions should be noted. Note the condition of the vital signs. According to Mannkopf pressure over a tender area will increase the pulse rate often as much as twenty beats per minute and in some instances produce sweating.

Disturbances of gait are usually easily detected. It invariably carries with it other signs impossible to simulate.

DISCUSSION.

Dr. Ferneau: Mr. President—Probably of any of the papers on the program, I really think that this is one of the most interesting subjects that could be discussed before a body of neurologists, because of all the cases that we have to contend with and that cause probably the most trouble are the malingerers; not so particularly with those that simulate the nervous conditions that can be by electrical tests, etc., found out, but particularly so in the traumatic neuroses. Because there is an element in those neuroses, or diseased condition, and still, reverting to the previous paper, that functional trouble comes in there, that intangible something that makes it indeed difficult to separate the wheat from the chaff. We don't feel at times as though the patients are simulating, and still every test and every possible mode that we know of ought to be employed to assure ourselves. And with all the attempts at detecting simulating, of course the first or chief is the existence of a motive for it. That established, the test can be made. But it is impossible, I think, at times, for some of these people can even simulate anæsthesia, and of course the hyperæsthesias are subjective, the pain particularly, that is always a question, and especially the spinal variety, that you can't get on the witness stand and let the jury see it as you see it. The doctor spoke about the eye and the ear symptoms, and in the hysterical neurosthesias, those I have just mentioned, with even the psychoneurosis, it hasn't proven in those cases to be wholly reliable. The most benefit that comes from much of this, of detection, is after the damages have been awarded. The paper was so fully presented on the neurological aspects that there isn't much that I can disagree with him about. Some one has said a long while ago that it follows that one is morbid who feigns or simulates either insanity or some condition similar to it, and there is probably, I think, in most of those cases even, there is degeneracy even if there are not some hysterical or neurasthenic symptoms.

Dr. Love, Toledo: Dr. Gaver has followed the subject out thoroughly. In other words, he has given us the whole subject in a nutshell, and very easy to comprehend. There is one subject he did not touch upon probably as he should, and that is the subject Huston has given us, of litigious insanity, or litigation symptoms, so-called. We know that a great many people get damages,

or try to get damages against a corporation that are very well, but they will simulate, apparently all sorts of symptoms to influence the jury. We all know, those of us who have had any experience on the witness stand, what the average jurymen is. It don't make any difference to the jury whether he is examined for the purpose of establishing the genuineness of his suffering or not; they take it for granted. And so it behooves the corporation against which the case is instituted to have an experienced man examine him and put him on the witness stand and expose him. In other words, the truth should prevail. I have had considerable experience on the witness stand with these so-called malingering cases. I would also like to relate an experience I had here in the county jail several years ago. A man was arrested for horse stealing, a man apparently 26 or 27 years of age, with all the evidences of a stigma; in other words, he looked the part of a degenerate. A short time after he was arrested he engaged his own counsel, made all the arrangements for his own trial, and immediately went into a condition of dementia præcox. I was called there to see him. The first time I wasn't fully convinced. The second time I was a little more convinced, and the third time more so, and the fourth visit I paid the man I pronounced it a case of dementia præcox. He even looked the part; he didn't only act the part, but he looked it as well. You have all perhaps seen these drooping cases of dementia præcox, that didn't even know when they were hungry; that type—absolutely demented. Well, the attendants around the jail made it so warm for him that he couldn't stand it any longer, and he got up out of bed one morning and with this expression: "Hell, I'm all right now!" I had a curiosity to see that fellow, and when I went in he laughed and I laughed, and I asked him to explain how he simulated so beautifully. He says: "Doctor, don't feel bad. I fooled four alienists before you saw me." He says: "I have been in three different asylums." Then I got him going telling me the story, and he told me how he got up these beautiful symptoms. He says: "Doctor, they put me in a room with another nut,"—that's the way he expressed it—"and he didn't know enough to come in out of the rain. I was in with that fellow six weeks, and I learned things just exactly as he did." A demented fellow; he didn't even pay any attention to the calls of nature; such a demented type as that. Well, that fellow is serving twenty years in the Ohio penitentiary today for horse stealing.

Dr. George: The doctor referred in his paper to the matter of accelerated pulse to cases where there was pain present, and it has been my experience, particularly in a certain case, to find an accelerated pulse when it was proven afterwards to be clearly a case of a malingerer. A short time ago I was called on the witness stand in a case of a man who was charged with larceny and arson, and it became my duty in connection with another physician to examine this patient prior to his trial. We made this examination in the jail, and the first step of the examination was the taking of the pulse rate, and as we entered the jail of course the man was under a considerable nervous tension, knowing our purposes, and we found his

pulse rate first 120. We put him through a process of mental examination, lasting for about an hour. Of course by that time we got on more familiar terms with him, and his nervous tension was somewhat relaxed, and the last step of the examination was taking his pulse rate again, and at that time we found that it had dropped to 90—from 120, when we first entered the jail, within an hour's time it had dropped to 90. It simply showed to my mind the high nervous tension under which he was laboring when we first entered.

Dr. Harding, of Columbus: The question of malingering being based on some abnormal psychology, and abnormal psychology being based on some anatomical condition, I wonder why it is that among the Russian Jewish element of large cities there is so much attempt at feigning disease. The members of the Russian Jewish sections of the city are known to contain a large number of individuals who seek help from the organized Jewish charities. In the city of Columbus for years these individuals, very numerous there, have been securing help from the various Jewish organizations, and during the past year the organized Jewish charities chose a medical director, and before a case gets help for medical purposes he must be examined by the medical director, or by some one whom that director selects to examine him, and they have got down the number of cases who have to be helped to hospitals and who have to be furnished money for the support of their families to about ten per cent of the number that were formerly getting help. They were found to feign diseases in many ways. One example was, a woman going along with her husband in front of a hospital would say: "John, I am very tired. I am not going any further; I am going to bed." Of course, after getting inside, usually a pretty good room in the hospital would be picked out, and then when the time comes to settle the bill they haven't anything, and they know the Jewish charities would assist them rather than see them go to jail and leave the family to be supported. They have had a number of individuals feigning weakness and sickness and various forms of paralysis and neuritis and eye troubles, and it is very common among them, and seems to be more derived from ignorance and the customs among the Russian Jewish element, due to a lack of family pride, and their desire to get as much help from the rest of the Jewish community as possible. I can't see any relation between this feigning of diseases for the purpose of getting help without work and the pathological basis. It seems to me more the result of a lack of proper mental training and of ignorance.

The Chairman: Is there any further discussion? If not, we will call on Dr. Gaver to close the discussion.

Dr. Gaver (closing): It was not my purpose, in reference to Dr. Love's discussion, to take up feigning insanity in my paper, as I felt at the time that that in itself was field enough for a paper. I only meant to dwell on the neurological side of the question. In touching, however, upon Dr. Love's discussion, I may say that some time ago I read a paper on the matter of traumatic neurosis, in which I recommended at that time, to avoid our bad jury system in that respect, if not

questionable in others to many of us,—to get around that would be to have appointed a state medical commission, before which commission all questionable trauma, or cases in which litigation is going to be, would appear, and have the matter settled before going to a jury; have the matter settled first, previously, before the matter would be tried in court. And this commission, a neutral commission, to work on a salary for the state is the only way, the only plan I could conceive that might obviate the trouble of juries awarding these cases damages. In reference to Dr. George's statement about the pulse, I may say he perhaps misunderstood me. I don't mean to say that all cases that suffer pain do; I didn't mean to dwell upon the fact that they do or do not have an accelerated pulse, just as you take them. Of course, suffering pain we expect in most cases to have a little acceleration in pulse, but the test is under pressure. Take a case that has an accelerated pulse. If at the point of pain you produce severe pressure, the pulse still would be further accelerated. That is the point I wish to make. It wasn't the fact that they did or did not have a slow or fast pulse. That only is one of the tests. Too much weight should not be placed upon it, but only associate that with your other signs and symptoms and take it for what it is worth. It only lends weight to the evidence.

TETANY OF CHILDREN.

D. S. HANSON, M. D.,
Cleveland.

[Read before the Ohio State Medical Association.]

Tetany is defined by Dorland to be a disease characterized by painful tonic and symmetric spasms of the muscles of the extremities.

Gowers (op. cit.) says about 29% of cases occur during the first decade and 55% during the first twenty years of life, and is most frequent in male children. The most frequent predisposing cause is doubtless rickets, and poorly nourished children are mainly the ones affected, and they are not uncommonly the offspring of sickly and illy-nourished parents.

The disease is also most common in cold weather, and this fact can reasonably be explained by the supposition that exposure of the cutaneous nerves to cold predispose to this disease and the closer confinement indoors during this season is productive of anemia and nervous affections in children. The affection seems to be a sequel to certain acute diseases not infrequently, such as typhoid fever, pneumonia, measles and after prolonged exposure to cold, and especially after surgical operations on the thyroid or anything that interferes with the secretion of the para-thyroid glands.

Tetany has undergone changes in its classifica-

tion since the discovery of its relation to the para-thyroids and the most accurate would be:

First. Duration tetany, a continuous strong tetanic muscular contraction in response to the continuous galvanic current; it occurs especially in degenerated muscles.

Second. Epidemic or rheumatic tetany, an acute epidemic disease lasting two or three weeks, rarely fatal and not uncommon in several European countries.

Third. Gastric tetany, a severe form due to disease of the stomach, attended by difficult respiration and spasm of the stomach; a case of this kind occurred at Lakeside Hospital, this city, in a young woman quite recently, in which the symptoms were so severe and oft repeated that a gastro-enterostomy was done in an effort to give her relief. The operation had the desired effect, and she is now, after several months, in good health.

Dr. Langmead, in the Transactions of the London Clinical Society, reports four cases of tetany due to dilatation of the colon. They had four attributes in common, (1) obstinate relapsing tetany, (2) abdominal distension, (3) offensive, unhealthy motions, (4) a dilated large intestine; in all cases the diagnosis was confirmed by either a laparotomy or post-mortem. Like gastric tetany, they point to a toxæmia as the cause.

Fourth. Parathyroid tetany, probably the most common variety, and which has, during the last few years, been so thoroughly gone into both by animal experiments and clinical observations, after surgical operations, that a unanimity of opinion now quite generally exists upon this phase of the subject. This was recently gone over quite extensively by Gerstenberger in a paper read before the Cleveland Academy of Medicine, and published in the Cleveland Medical Journal of November last.

It is interesting to note that in the case there reported that parathyroid extract given by stomach gave no relief, and even a fresh extract, prepared from a fresh gland and given hypodermically, gave no better results and demonstrated quite conclusively that this case was probably due to something besides a deficient parathyroid secretion.

MacCallum and Voegtlein in animal experiments found that there was a profound disturbance of the calcium content of the blood and tissues after the removal of the parathyroids, this element being rapidly lost by the economy, and that by administering the calcium lactate intravenously improvement of the tetany rapidly ensued, even when given by the mouth the same, but slower effect could be produced.

When the calcium was withdrawn convulsions reappeared but were again controlled as soon as the lactate was administered. They report a case in a child in which brilliant results were achieved by a similar line of treatment. Muesser, Metzger, Quest and Cybulski each report a case successfully treated in a similar manner. The last two found that the calcium salts were greatly diminished in the brains of children dying of this disease. All these observations seem to confirm the conclusion that the parathyroids in some way have much to do with the metabolism of calcium and that the latter when in deficient amount predisposed to this disease.

Although as above mentioned, a unanimity exists relative to the relation of this gland to the etiology of this variety, no such a unanimous opinion exists regarding the idiopathic form of this disease, and this is especially true in the infantile variety. Pineles is of the opinion that infantile, idiopathic and parathyroid of man and parathyroid tetany of animals are one and the same thing, and Escherich is inclined to the same opinion, but states his evidence is largely theoretical. Yanse in making post-mortem examinations in eighty or ninety children under three years of age that had suffered from tetany, and showed hyperactivity to the galvanic current, found evidence of hemorrhage of the parathyroids in all the cases, and he thinks it due to trauma to the neck during delivery, because the most severe lesions were present in the youngest children. So far his findings have not been confirmed by other observers, and the changes in the glands that he accepts as evidence of old hemorrhages into the gland substance are not entirely convincing.

The symptoms of tetany are usually divided by the authors into the latent and manifest. In the former or in the intervals of the attack a triad of signs, either singly or all together occur and known as Trousseau's, Chvostek's and Erbs phenomena. Trousseau's phenomena consists of the fact that pressure on the nerve trunk in the bicipital groove of the humerus or by elastic constriction of the arm the characteristic contraction occurs; Holt says the same sign can be elicited by pressure on the main artery of the limb. In order to get a full response to the constriction of the limb, it must be continued for several minutes or until the limb becomes somewhat cyanosed.

Chvostek's, or the so-called "facial reflex," is also an expression of increased mechanical irritability, and is produced by sharply tapping the facial nerve about midway between the zygomatic process and the angle of the mouth, when lightning-like contractions of the muscles supplied by

that nerve takes place, in some severe cases even stroking the cheek will produce a like effect.

Erbs' phenomena consists of an over-excitability of the entire peripheral nervous system to galvanic current, Fleiner, and in fact many pediatricists believe that where this sign is absent no tetany is present, and that the nervous symptoms have to do with some other disease.

Gregor first pointed out a condition of hyper-tonia in bottle-fed infants due to nutritional disturbances, in which electric over excitability existed, and yet they did not have active tetany at any time and are neither the myotonias of the new-born. The persistent muscular spasms described by Zappart are distinguished by the fact that they are never intermittent.

The chief symptoms in the manifest form consists of intermittent tonic convulsions of the extremities, especially the upper, frequently accompanied by parasthesia of the extremity, consciousness being always preserved. In well-marked cases the hands are forced into the obstetric position, arms flexed on trunk, forearms on arms and hands on forearms, giving a position of the arms similar to a dog's front legs when he sits up and begs for food and known as the "begging dog position." A typical sign is here noted, the shoulder and elbow joints are movable but the wrist is fixed during the spasm. When the lower extremities are affected the thigh is flexed on body and leg on thigh and the feet are in the position of varus or equino-varus, while the first joint of toes are flexed, the other two are extended. Often in severe cases the spasm extends to head, face and neck, brows become furrowed, eyes crossed, mouth contracted and lips protruding, giving the expression known as "carp's mouth," sometimes jaws become fixed and muscles of neck are contracted and painful, and even the abdominal muscles may contract and produce a peculiar pain described by the patient as of a burning character.

In the case here reported the spasmodic action seemed to extend to the intestines, producing spasmodic colic, a symptom I find nowhere mentioned.

Case. Emma K., age 8 years, family history good, although mother's family as a rule are nervous and anemic; our patient was somewhat anemic, of a nervous temperament, habitually constipated, rather small for her age and inclined to carry her activities to the point of exhaustion, as we find to be the case in many of these nervous children. I was called in the evening of January 16th last to see her for pain in the abdomen; at once it was to be seen that the suffering was of a peculiar and unusual character; patient was in constant motion, leg and arms flexed, although feet and hands were not affected, the great rest-

lessness reminded one of chorea, abdomen somewhat tympanitic, and although she complained much of pain in abdomen, her expression did not indicate severe suffering, she complained of a slight headache and brows were corrugated; her temperature was normal.

The history of the case developed the fact that she had not been well for two or three months, being nervous and her school work caused her to be irritable, and on three occasions during last month she had fallen in what the parents said were "fainting spells" while at play, and in one or two instances had to be carried into the house before she revived, but in a few minutes seemed to completely recover, so that a physician was not called. An anodyne in small doses was given, an enema and a purgative was ordered and the following morning she was free from pain, but legs and arms not fully relaxed. The pain in abdomen was never again so severe and could be fairly well relieved by antispasmodic, such as valerian and assafœtida. The following day she had several spasmodic attacks of extremities with nearly complete cessation of contractions in the intervals, but the third day the contractions seemed worse than at any time, and a consultant saw the case with me; at this time she had vomited once, complained of pain in head and neck, legs and arms contracted, feet extended but hands not in typical position, temperature elevated 1 degree, brows contracted, eyes crossed and neck rigid, patellar reflex of right leg much exaggerated, left normal.

We felt much concerned relative to a diagnosis, fearing meningeal involvement of a tubercular nature with a possible tubercular peritonitis, but after considering the case fully we were inclined largely from the fact of entire absence of fever up to the last few hours, and now only so slightly elevated, that the disease was tetany as it had been previously diagnosed to be.

Not having a portable galvanic battery at hand the electric reactions were at no time taken. The following day the temperature was normal and, aside from some abdominal pain and restlessness, she was comparatively well. On several occasions in the next few days I was hastily called because her jaws were fixed; at one time this lasted for nearly two hours and parents feared that she was developing "lockjaw." At this time the typical carp-mouth was present.

A general tonic course of treatment was pursued and symptomatic measures as indicated, cod-liver oil did not agree with her digestive organs and arsenic pushed to a full physiologic effect, and after a short interval repeated did no good; ferric phosphate in two grain doses three times daily seemed to have a happy effect and is being used

up to the present time. For the last four or five weeks none of the symptoms have appeared except about once a week the abdominal pain reappears, but not in a severe form; her anemia has pretty well disappeared and her nutrition is greatly improved. The use of the calcium lactate was not used because I had not read anything relative to its employment until active symptoms had disappeared.

In reviewing authorities as before mentioned they seem to agree relative to the relation of the parathyroids in certain cases, but aside from this the pathology is somewhat uncertain. Holt is of the opinion that the nerve cells of the spinal cord and medulla are involved through lack of nutrition, thereby confirming the opinion long ago expressed by Gowers. Starr says meningeal hemorrhages of the membranes of the spinal cord have frequently been observed.

Thiemich and Max Goepp, in Pfaundler and Schlossman's "Diseases of Children," although giving a very excellent discussion of the subject, say nothing regarding the morbid anatomy. Langhaus has described a periarteritis and phlebitis in the white commissure and cervical portion of the cord, and Fischel gives the result of his autopsies without comment and his findings include hydrocephalus interna and externa, œdema of the brain meninges, tuberculosis of the brain, hemorrhagic infiltration of the cerebellum and meninges, chronic intestinal catarrh and broncho-pneumonia.

Upon the whole it seems that in quite a large percent of cases the parathyroids from some cause are not secreting in a normal manner, and that in many cases the motor cells in the spinal cord have lost control.

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BOOK REVIEWS

THE DISEASES OF INFANCY AND CHILDHOOD. Designed for the use of Students and Practitioners of Medicine. By Henry Koplik, M. D. Attending Physician to the Mt. Sinai Hospital, New York; ex-President of the American Pediatric Society. New (3d) edition, enlarged and thoroughly revised. Octavo, 944 pages, with 204 engravings and 39 plates in colors and monochrome. Cloth, \$5.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1910.

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Thirty-nine full page plates add to the attractiveness and lucidity of the work, which has already achieved a well-merited popularity, which this edition will doubtless greatly augment.

THE ESSENTIALS OF HISTOLOGY. Schäfer. Eighth Edition. Lea and Febiger, 1910.

Previous editions of this little student text have proven their value in years past. The present edition incorporates all the recent advances in histological technique and places particular emphasis on this phase of the work. The book is divided into a series of fifty lessons for the student which makes it especially valuable for classroom work.

NORMAL HISTOLOGY. Piersol. Eighth Edition. Lea and Febiger, 1910.

This edition is largely rewritten and has been materially improved. The work is characterized by a presentation of the salient features of histology and histological technique without too much minutiae. It is essentially a student text and is a good and comprehensive presentation of the subject.

PATHOGENIC MICRO-ORGANISMS. Park and Williams. Fourth Edition. Lea and Febiger, 1910.

The fourth edition of this book is the outgrowth of a small volume issued several years ago which has passed through three successful editions. The work deals especially with the micro-organisms which infect man with some general bacteriology. The part of the book on protozoa, written by Dr. Anna Williams, is especially noteworthy. The book contains a large amount of valuable material on technique, etc., which is not found elsewhere in English medical bacteriologies. On the whole, the work is a well executed and valuable presentation of the present knowledge on the pathogenic micro-organisms. Much of the material is to be found in Kolle and Wasserman, *Handbuch der Pathogenen Micro-organismen*.

NURSING IN DISEASES OF THE EYE, EAR, NOSE AND THROAT.—By the Committee on Nurses of the Manhattan Eye, Ear and Throat Hospital. 281 pp. W. B. Saunders Company. 1910.

This little volume was designed to serve as a text-book for use of nurses in the training school of this special hospital; so several chapters are devoted to general nursing.

The technique of procedures required of nurses

in these special departments is carefully given with desirable detail.

The anatomy of the parts is rehearsed, and a brief resumé of the more common disturbances affecting them is also given.

The book should be helpful as supplementing any course in general nursing, as a demand for the skilled supervision and care of these special cases is constantly increasing.

ESSENTIALS OF LABORATORY DIAGNOSIS, DESIGNED FOR STUDENTS AND PRACTITIONERS. By Francis Ashley Faught, M. B., Director of the Laboratory of the Department of Clinical Medicine, etc. Second revised edition. Philadelphia: F. A. Davis & Co.

This is another work on the above subject of which so many have appeared of late, demonstrating the wide interest in laboratory work at present manifest. This compares very favorably with others, and has some points of superiority. It is practical, concise, clear and sufficiently comprehensive for the calls of every-day practice. We fully commend it to our readers.

INTERNATIONAL CLINICS, VOL. III. Twentieth series. Lippincott & Co., Philadelphia and London.

Volume III contains a number of interesting articles covering considerable range of subjects. Würdmann reports an unusual opportunity for localizing the idiographic centre; Gorham's case emphasizes the difficulties in some instances of recognizing renal calculi; Austin contributes a timely review of the auto-serotherapy in which he regards its use as very promising. Walsh gives some excellent practical suggestions for the treatment of pulmonary tuberculosis, and Thomas writes an excellent resumé of bacteriotherapy. Myers writes well on hydrophobia and presents a beautiful colored plate of the Negri bodies.

Numerous other writers contribute.

THE TREATMENT OF CATARACT—Lieutenant-Colonel Henry Smith, N. A., M. D., M. Ch., Indian Medical Service—With appendix by Captain A. E. G. Lister, M. B., B. S., F. R. C. S., Indian Medical Service. Illustrations by Dr. Derrick T. Vail, Professor of Ophthalmology, University of Cincinnati. Calcutta, Thacker, Spink & Co. 1910.

The extraction of cataract in its capsule by the method of Major Smith has attracted a great deal of attention during the last few years, and while much discussion has appeared in the medical journals, and more will follow as a larger experience enables the members of the profession to judge accurately of its merits and limitations in our Amer-

ican practice, it is of the utmost interest to be able to read in this compact little volume as we now do for the first time, Major Smith's detailed account of each step fully illustrated by the numerous original drawings made in the Jullundur clinic by Dr. D. T. Vail.

It is one of the great misfortunes of the medical, as of other professions, that the making of books is very often the work of professional bookmakers and the really original workers, whose every word is pregnant with meaning to those working in the same field, are so preoccupied by their labors as to be able to give little time to the imparting in detail the results of their rich experience. This applies with special force to the case of Major Smith who has undoubtedly had the most phenomenal experience in the extraction of cataract of any man of this or any other generation of whom the world has a record.

All that he says on this subject is by no means to be taken as law and gospel, but when a keen observer and bold original thinker who, basing his opinions upon an experience of 25,000 operations, is good enough to take the pains to tell us what he knows about cataract extraction, it is well worth our while to give respectful heed to what he may have to say.

The book is an octavo volume with 121 pages of text and 52 pages of illustrations, and while it is doubtless true that any but the most experienced and careful reader is liable to fall into error if he attempts to perform a complicated operation by following the description, unchecked and unaided by actual observation, it would seem that the minutely detailed instructions and carefully prepared diagrams of each step as herein given might prove an exception. Certainly any careful student, with some experience in the extraction of cataract as generally performed, should be able to obtain a very fair idea from this book of how to extract the lens in its capsule.

While the new operation can undoubtedly be successfully performed by methods of differing in many of the details from that described in this volume, those who, with the writer of this review, have enjoyed the privilege of extracting large numbers of cataracts under Major Smith's personal supervision will agree that there is an excellent reason for almost every detail mentioned in his description and, while it required some effort on our part to break away from the methods successfully practiced for many years in the performance of the old capsulotomy operation, and which were well adapted to that method, we were amply repaid for our trouble by the greater facility with

(Continued on page 657)

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THE CLOSE OF VOLUME VI.

The present issue completes Volume VI of THE JOURNAL. Eighty-nine original articles have been presented, covering a wide variety of subjects, as shown in the index incorporated in this number, together with a large amount of county society news, and items of medical and organization interest.

Every once in a while one hears of remarks as to the "loss" incurred in the publishing of THE JOURNAL. This has arisen partly from the use by the auditors of that term in the annual report, which is used in the bookkeepers sense and refers to the amounts paid by the Association to make up the difference between the advertising receipts and the gross expenses of publication. In considering this, however, one must remember that there is no subscription revenue whatever, and that if the net loss is considered as subscriptions it would amount to less than 60 cents a number. There are few magazines of this character with less subscription price than \$1.00 per year, and THE JOURNAL on that basis would be paying a profit of \$1500. Further, we want to say that for the sake of comparison, estimates were sought from various publishers,

as to the expense of bringing out the original articles presented at the last meeting in the shape formerly called the Transactions, in an edition equal to the circulation necessary at present, and the cost of publishing, binding and delivery exceeded by not a small amount the present "loss" on THE JOURNAL.

In other words, it would cost the Association more to publish the papers read at the annual meetings of the present time in the form previously employed, than it does to publish THE JOURNAL.

OUR STATE HOSPITALS.

The meeting of the Association of Assistant Physicians of the Ohio State Hospitals held in Cleveland in the early part of October demonstrated some commendable efforts that are being made in some of our state hospitals in spite of the well known very serious handicaps. The general character of the papers was good, and the essayists showed an earnestness and interest in their work that is encouraging.

For some time past our state hospitals have been more or less under a fire of criticism from the profession because of the moderate amount of scientific work emanat-

ing from them and a certain lack of initiative and progress manifested in recent years. The statement is heard from time to time that at least in some instances they are more places of detention than *hospitals*. Whether this is true or not, there is some ground for feeling dissatisfied with the present status—as far as the medical services rendered therein are concerned, and there are certain very obvious abuses, the correction of which would go a long way toward relieving the trouble.

One of the first of these was indicated in the paper read before the meeting above mentioned by Dr. J. C. George, of Dayton.

The writer brought out forcibly the fact that the staff physicians of our state hospitals receive less compensation than in almost all the other states of the Union. The initial salary of \$600, increasing to a maximum of \$1200, can only induce beginners in medicine, often just out of college, to seek these positions. Then, when after a few years training they have become more or less equipped for their work, and prepared to give services of value to the state, they, particularly the good men, find they cannot afford to continue with the existing prospects. The initial salary is not of so much importance, although it would be of advantage to have it increased so as to make it attractive to our bright young men to engage in the service; of greater value, however, would be the promise of increased salary, graded according to terms of service so as to offer inducement to remain.

Together with this should go assurance of stability of the position. This latter brings us to the second abuse, which is even greater than the former, and that is the baneful influence of politics. Unquestionably too often, staff positions and especially the office of superintendent have been considered the legitimate spoils of the party in power at the moment. The fact that a change in politics endangers one's position dampens the ardor, clogs the initiative, and

in every way hinders the development of the best service.

Then, too, with the present boards of trustees, constituted almost entirely of non-medical men, the trend is to make a business success of the institutions. The reduction of the per capita expense is fairly made a god, before which medical efficiency and scientific investigation must bow down! The superintendent must give the largest part of his time to executive duties and the assistants also are called upon to help in routine clerical work.

Here is a crying need, and our Association should give ear and seek with all its might to relieve the present conditions and bring Ohio up in line with our neighboring states. It has been suggested that there should be medical boards in connection with each hospital, to foster the medical interests of the patients. Certainly the superintendents should be alienists of experience, with sufficient salaries and with assured positions; they should be relieved of the time consuming executive work so that they could devote their entire efforts to the study and relief of their afflicted charges. The assistants likewise should be carefully chosen for their proficiency, sufficiently paid and offered prospects for advancement if they show themselves worthy.

This will all take time. Legislatures are hard to convince, but perseverance and persistence, and *educating the people* will bring eventually the desired results.

THE ROSTER OF OUR MEMBERS.

THE JOURNAL publishes in this issue a complete roster of the members of the State Association, and wishes to draw especial attention to it, so that any mistakes or omissions may be corrected. It is naturally a difficult matter in compiling lists of so many names, in this case nearly 4000, to keep them free from errors. It will be appreciated, if, therefore, any of our members find such in either their names or addresses, they will

send a card to this office advising us of the correction. Many names have been dropped from the rolls, according to our constitutional requirements, for the non-payment of dues. This has been largely the result of individual negligence, and it is to be hoped that this publishing of the list may draw the matter more forcibly to the attention of such members, who are entitled to membership and who owe it as a duty to themselves, to the community at large, and to the medical profession to maintain their connection with and support of the state and county organization.

The attention of the county secretaries is also particularly directed to this roster as an opportunity of making comparison with their membership lists and the state records. It must be remembered by them also that mistakes of omission and commission may readily have occurred from numerous sources. Our lists are compiled from reports of the secretary and names are sent in detachments at all times of the year. There are many opportunities for these errors to creep in, and it is to be hoped that with the cooperation of the county secretary many of these will be corrected forthwith.

It is to be hoped also that as individual members note the absence of names of eligible colleagues, they will take it upon themselves to speak to such and urge their aligning themselves with the more progressive, wide-awake members of the medical profession. Organization is the watchword of today; we are feeble as individuals, but mighty when united.

EDITORIAL NOTES

PROGRAM OF SECTION ON MENTAL AND NERVOUS DISEASES.

The preliminary program of the sessions of the Section on Mental and Nervous Diseases for the Cleveland meeting in May next is partially formed. It is the urgent desire of the officers of the section that it be completed as soon as possible. The program material must be submitted to the council for their inspection and approval, that they may determine the character and scope of

the scientific proceedings and the council in conformity with the by-laws demands that the preliminary program be forthcoming at earliest date. Regarding any contributions to the program, communicate with the Secretary—S. P. Fetter, Portsmouth.

RESOLUTIONS.

ADOPTED BY THE WARREN COUNTY MEDICAL SOCIETY LEBANON, OHIO, NOVEMBER 10, 1910.

WHEREAS, There is abundant reason to believe that the practice of criminal abortion is alarmingly prevalent in this and other states; and,

WHEREAS, In many communities legally qualified physicians may be found who dishonor their calling by performing this criminal operation, which, owing to the secrecy surrounding its performance and the interest of the parties concerned to conceal it, baffles the purpose and efforts of the decent element of the medical profession to suppress this traffic in life; therefore be it

Resolved, By the Warren County Medical Society in regular session this tenth day of November, nineteen hundred and ten, that the physicians of Montgomery county and especially most of those of Miamisburg be commended for their courageous presentation of charges against one of their number for the commission of this offense. And we wish to record our confidence in the integrity and high and worthy purposes of the physicians making and supporting said charges, and we also heartily approve the action of our state medical board in revoking the certificate of one found guilty of this heinous crime; and

Resolved, That this society does not consider this case of merely local concern, but as affecting the honor and good name of the medical profession, and from the high character of Governor Harmon (to whom the case is appealed) and his clear conception of professional standards shown in the lucid reasons given for vetoing the optometry bill, this society has confidence that he will sustain the state medical board in its findings in this case and he is assured that in this action as in his veto of the optometry bill he has the hearty approval and support of the medical profession of this county.

Signed:

N. A. Hamilton, President.
Herschel Fisher, Secretary.

CORRESPONDENCE

LOS ANGELES MEETING OF THE A. M. A.

MY DEAR DOCTOR: The Los Angeles meeting of the A. M. A., beginning June 26, 1911, will be one of the notable occasions in the history of this organization.

The physicians of California have already, through their committees, begun the active work of preparation.

Dr. H. Bert Ellis, Suite 245 Bradbury Bldg., Los Angeles, is the chairman of the Executive

Committee and will answer any pertinent questions.

This is the time to visit California and at the same time attend the A. M. A. San Francisco—500 miles north of Los Angeles—can show you many interesting features of the historic earthquake as well as her wonderful rehabilitation, that surpasses anything in previous human records.

Los Angeles has several of the finest hotels in the world, theaters, opera houses, mountain and seaside resorts, fruit-laden orange groves and beautiful flower gardens and parks.

Every member of the A. M. A. will be invited to gather all the oranges he may wish from the trees and will be taken to Catalina Island, twenty-five miles out to sea. The latter trip will be an auspicious introduction to the Pacific ocean.

Come and be happy and have a delightful memory to dwell within you the balance of your life.

The Southern California Practitioner is just completing a quarter of a century as the representative medical journal of southern California. It is the official organ of the Executive Committee. It will place you in close touch with the profession of California.

Hoping to see you at the office of the Southern California Practitioner next June, I am,

Yours fraternally,

WALTER LINDLEY,

Editor and Publisher Southern California Practitioner; Member California State Board of Medical Examiners; Ex-President California State Medical Society.

P. S.: The ladies of Los Angeles will see that your wife and daughters have a good time. Social functions are being arranged for them in our choicest homes.

BOOK REVIEWS

(Continued from page 653)

which we obtained results when we frankly adopted the new method in its every detail.

The method of making the section, its location and the form and method of making the iridectomy are details in which perhaps some latitude may be allowed without causing serious trouble, though the best results seem to follow strict adherence to the methods described, but, in the essential matter of controlling the lids and the method of delivering the lens, we found it of the utmost importance to adhere strictly to the directions given.

The writer is by no means ready to accept Major Smith's method as a full substitute for the

old operation in all cases in our American practice, as in a large number of our patients the old method, while less brilliant, offers more positive assurance of a good result, and under careful after treatment involves less risk of serious accident. But a most careful study of a large number of cases, and a considerable experience in the Jullundur clinic warrants him in making the statement that, especially in dealing with immature cataracts, the new operation is a positive and most valuable addition to our resources as ophthalmic surgeons.

If those who, without large experience, are disposed to pass unfavorable judgment on the work of Major Smith, as has been done by some Indian confreres, will carefully study the pages of this little volume and then put into practice some of the suggestions therein contained they will, I think, be surprised to find how refreshing it is to occasionally encounter a really valuable and original idea.

American ophthalmic surgeons will not be satisfied with the somewhat casual method of conducting a preliminary examination as described in the chapter on diagnosis and classification, but those who have seen what may be termed the field surgery methods of the Jullundur clinic will recall how sure was the judgment, how true the intuition and how keen has been the observation which, by apparently crude methods, arrived at a correct diagnosis in an incredibly short time.

Especial attention should be given to the illustrations and accompanying text on pages 62-63 describing the methods of controlling the lids and orbital muscles. On a mastery of this subject by both operator and assistant depends the success of the whole procedure.

The numerous diagrams admirably illustrate each step in the somewhat complicated process of delivering the lens and the various other steps in the operation.

The appendix by Captain Lister is a most valuable contribution, giving in detail the late results in a large series of the cases in which there had been more or less loss of vitreous. It is surprising how infrequently loss of vitreous occurs and, when it does occur, how seldom the results are serious.

C. F. Clark, M. D.

The presence of sciatica demands a careful exploration of the pelvis by rectal or vaginal examination. It should also be remembered that Osler described sciatica as one of the early symptoms of cancer of the breast.

CURRENT MEDICAL LITERATURE

J. E. TUCKERMAN, M. D., Cleveland.

LOUIS A. LEVISON, M. D., Toledo.

INDUCED ABORTION.

The following from an editorial (Penn. Med. Jour., Sep., 1910, p. 967) is so well written and so the point that it is reproduced for the sane, common sense view it voices:

"What family physician has not had his heart ache for some poor and overworked mother who has become pregnant before her last child is able to walk, and yet he knows full well that her inconveniences and sufferings are less than those of the average woman who has refused to carry her child to term. Where one woman is incapacitated because of previous child-bearing there are, probably, three women dragging out a miserable existence, the result of induced abortion. Where one woman dies during labor, probably, four die as the result of induced abortion.

"No one is better fitted than the physician to pity the unfortunate girl, who as a rule has been more sinned against than sinning, but if he attempts to help her out of her difficulties and succeeds in terminating her pregnancy without publicity or marked impairment of health he thereby encourages the man, and probably the woman also, to continue to violate the laws of God and man.

"The physician who performs his first criminal abortion, be it out of sympathy, or out of selfishness and fear that he will lose a patient, takes a long step downward and a step that is hard to retrace though he is likely many a time to wish to retrace his steps. He may think that his act is unknown but his associates will know it when they see entering his office from time to time the woman who has in vain applied to them for assistance or when they see his carriage waiting before her home. The husband, or the young man, is almost sure to know who has done the deed and one of them will tell some friend in need, in fact, after they have become hardened in the way they will take delight in advertising the doctor. To the young man beginning the practice of medicine we wish most earnestly to commend the language of Dr. Steck, 'Let neither tears nor gold dissolve your manly purpose. The tears of God outweigh the tears of misguided humanity. The gold of a pure conscience is more precious than gold secured at the price of broken law and frustrated divinity.' When once the young physician has begun the nefarious business of criminal abortion he has entered upon a life more un-

happy and more dishonorable than the pitiable death of the young physician in Perry county recorded in our state news items this month."

EXTENSION TO PREVENT ANKYLOSIS
IN ACUTE JOINT DISEASE.

"Dr. John B. Murphy of Chicago (by invitation) delivered this address. Dr. Murphy said that ankylosis of joints occurred only where the bony surfaces came into contact. Therefore, in acute joint affections, to prevent ankylosis, extension should be put on. In the second place tension must be relieved not by incision, as that leads to obliteration of the cavity, but by aspiration. Following aspiration there should be injected into the joint a 2 per cent. solution of formalin in glycerine. In acute osteomyelitis in order to prevent destruction of bone it was essential to relieve pressure at once. This could be done with a knife and a gimlet. In case the bone was destroyed it could be restored by transplanting."—Medical Record.

NEUTRAL ANIMAL OIL FOR PREVENTING
POST-OPERATIVE ADHESIONS.

Crump (Surg., Gynec. and Obs., Nov., 1910, p. 491), has used sterile olive oil introduced into the abdomen to prevent post-operative adhesions. He has found it satisfactory except for the fact that there are about three hundred different brands of oil and that the acidities of the oils vary a great deal. He objects to the use of sterile vaseline oil for this purpose because it is a foreign body which is absorbed with difficulty and often gives rise to inclusions, acting in this respect as a foreign body. Seeking an oil more suited for this purpose than either of the above, he has had prepared from fresh leaves of tallow an oil which is approximately olein 60%, stearin 20%, palmitin 20%, with slight traces of free fatty acid not exceeding 5/10%, and usually less than .25%. Experiment has shown that this oil is unfavorable to the growth of bacteria. He has found that this neutral oil produces gratifying results "in cases of tuberculous peritonitis, general septic peritonitis; many cases where gauze packs have been used or where there has been much handling of viscera, and especially in extensive old adhesion cases. It is an excellent germicidal lubricant in gynecological and obstetric cases, especial-

ly bland and useful for enemas and bladder irrigation, and an admirable base for local medication." The neutral animal oil is best kept in stone jugs or wooden casks in a cool, dry place away from sunlight. In sterilization for use, its neutral state is best preserved by pasteurization three times at from 80 degrees C. to 88 degrees C. in tightly sealed amber-colored bottles to keep out moisture and prevent the action of sunlight. This oil reaches its highest degree of liquefaction and lubrication at body temperature. It is of especial use in cases where there has been excessive handling of the abdominal viscera; where adhesions are present or feared; where there remain extensive uncovered raw surfaces; where it is desired to favor free abdominal drainage to the pelvis or drainage tracts in all septic cases; and where following conservative operation on the pelvic organs, it is especially desired to obtain patulous tubes.

SLOW STRETCHING OF THE MUSCLES IN REDUCTION OF FRACTURE.

"Dr. Albert J. Ochsner of Chicago: I would like to describe a method which we use almost entirely. It consists in the slow stretching of the muscles instead of the rapid stretching, and the only thing that is peculiar about the method is the application of rubber adhesive strips to as high a point above the seat of fracture as is possible. For instance, instead of applying the rubber adhesive up to the fracture, it should be applied over the entire length of the thigh; then, with no more than 24 pounds of weight, we have, in every fracture where there has not been a union, been able to stretch the muscles sufficiently to replace the fractures without making a resection of the ends. In cases where there is a union in malposition, the muscles will stretch to a marked extent. It is important to use two Lane plates, with two screws at each end in order to keep the bones from slipping."—Bost. Med. and Surg. Jour.

DIFFUSE AND GENERAL PERITONITIS.

"Dr. John J. Buchanan of Pittsburg read a paper, saying that the best treatment of peritonitis was its prevention. The bulk of the cases are usually the result of perforative appendicitis and can be prevented by removal of the appendix within a few hours or a day of access of first pains. Purgation was the most deadly medication that could be employed in acute appendicitis or diffuse peritonitis. Immediate operation, or at least during first 24 hours, by removal of appendix, dry mopping, closure of abdomen without drainage can be relied on to cure almost every

case of free, diffuse or spreading peritonitis from perforative appendicitis. Treatment by irrigation was disseminative of septic products and should not be employed. Even the earliest operations can not yet be relied on to check the spread of peritonitis from perforated gastric ulcer, and in these cases the delay of a few hours may mean death for the patient.

"Dr. John B. Murphy of Chicago said that he has had 64 consecutive cases of perforative peritonitis with 62 recoveries. This did not include the appendiceal abscesses or appendicitis cases with large quantities of pus that did not communicate directly from the alimentary tract into the free peritoneal cavity. He felt that we as a profession must come up to the standard that all of the cases of appendiceal peritonitis with the exception of 1 per cent. of primary perforation were avoidable. The diagnosis could and should be made before the perforation."—Medical Record.

MASSAGE IN COCCYODYNIA.

"Leonard W. Ely of New York has obtained uniformly successful results in the treatment of coccygodynia through massage of the coccyx, with the forefinger in the vagina and the thumb over the coccyx. The bone is moved backward and forward and the soft parts are moved about on the bone. The manipulation is begun very lightly and gradually increased in force as the patient becomes less sensitive. Two or three treatments usually suffice, the improvement being almost instantaneous. Intervals between treatment should be two or three days.—J. A. M. A., March 19, 1910."—Jour. So. Carolina Med. Assoc.

ABSENCE OF PAIN AND RIGIDITY IN APPENDICITIS OCCURRING IN A TABETIC.

Connor (J. A. M. A., Oct. 22, 1910, p. 1427), reports such a case and gives a very full discussion of the absence of pain and other abdominal symptoms in tabetic patients. Except for mass palpable in the right side, chills and profuse sweating with malaise, and a high leukocyte count there was no basis for a diagnosis. Autopsy showed a perforated appendix and general peritonitis.

AUSCULTATION AS A MEANS OF DIAGNOSING FRACTURES OF THE RIBS.

(Interstate Med. Jour., Oct., 1910.) "Auscultation, in Lipsitz's opinion, will reveal fracture of a rib quicker than palpation will. He says that the sound obtained over a fractured rib is characteristic, is unlike the sounds of pleural rubs, air crepitation or râles and is therefore pathognomonic.

Direct auscultation is not as satisfactory as the indirect method with the aid of the stethoscope. Have the patient inspire as deeply as possible. The sound is usually best elicited at the height of the inspiration or during the beginning of expiration. On listening in this way, it is with rare exception that any fracture of a rib can escape the examiner's notice. In two cases of the series there were multiple fractures. The exact site of each lesion was located without difficulty. In three cases the diagnoses were made by auscultation alone, palpation and manipulation giving negative results. This was explained by the knowledge that the severe pain produced by manipulation lessened the efficiency of this procedure, and that mere palpation was not sufficiently delicate. In all the other cases in which manual methods gave positive results auscultation was correspondingly successful. In a number of cases of suspected fracture not included in the series, careful auscultation was unsuccessful and invariably the results of palpation and manipulation were also negative. Other diagnoses were made. One may listen over almost any part of the affected side and elicit the peculiar hard, grating, breaking sound or the "click" which emanates from the site of the fracture. Once this sound is discovered over any portion of the chest, it can be followed in the direction of its increasing intensity, until, where it is most pronounced, the site of the fracture is located. As a rule, with practice, if more than one fracture is present all the lesions can be found in this way. This sign is so reliable that it is seldom necessary to send a patient away with a doubtful diagnosis."—J. A. M. A.

NEW THERAPEUTIC USE OF FORMALIN.

"In the August number of the American Journal of Orthopedic Surgery is an article by Dr. Roland O. Meisenbach of Buffalo, N. Y., presenting the results of some interesting and delicate animal experimentation performed with a view to determining the effects of chemical and mechanical stimulation upon bone-growth. A series of injections of various irritating substances was made in the region of the upper epiphyseal line of the tibia in young rabbits. The lesions thus formed were then studied by X-ray and microscope at varying intervals of time, with the result that the stimulated bone was found to ossify more rapidly than normal bone. Mechanical stimulation appeared to affect chiefly perichondral bone-formation, whereas chemical stimulation affected chiefly endochondral bone-formation. Of all the substances experimentally employed for injection, formalin proved most satisfactory, since

it combines the effects of mechanical and of chemical stimulation, causing the 'formation of osteogenetic tissue by influencing the zones of provisional calcification and calcified matrix, and by increasing the number of osteoblasts derived from the perichondrium.' The author believes that his observations suggest a possible new therapeutic use of formalin by injection to stimulate bone-growth in congenital shortening of a limb, in infantile paralysis, bone-tuberculosis, osteomyelitis, obstinate non-union of fractures. If verified by clinical application, the results of his admirable piece of research seem likely to be the suggestion of a new therapeutic procedure that may prove of great value in general as well as in orthopedic surgery."—Editorial from Bost. Med. and Surg. Jour.

MYOMECTOMY VS. HYSTERECTOMY FOR UTERINE FIBROIDS.

Frick (Missouri State Med. Jour., Nov., 1910, p. 153), gives a concise review of the subject. He says that it is rare that the surgeon is called upon to operate upon a "symptomless fibroid." Patients having no symptoms do not present themselves to the surgeon. The advantages of hysterectomy are: (1) The recurrence of myomata is avoided, (2) carcinomatous and sarcomatous degenerations cannot occur following complete removal of the uterus. The disadvantages are: (1) Sterility, (2) prolapse of the bladder and rectum may occur, (3) artificial menopause if pan-hysterectomy is done. Artificial menopause need not occur as it is rarely necessary to remove both ovaries. The disadvantages of myomectomy are: (1) That other myomata may develop, (2) that degenerative changes, carcinoma, etc., may be superimposed. Whenever at operation the myoma shows any degenerative changes, a hysterectomy, not a myomectomy, should be done. One objection raised to a myomectomy is that the uterine musculature is damaged. This, however, is certainly no more serious than the damage which follows a Cæsarian section, and there are sufficient cases on record of successful pregnancies following myomectomy to rule out this objection. Particularly is this so since the operation is done in women who have not passed the child-bearing period for the express purpose of retaining for them the possibility of having children. Adhesion between the intestine or omentum and the incision in the uterine wall can be avoided by a careful technic such as that described by Howard Kelly.

"The abdominal cavity is walled off with gauze, the uterus delivered and protected with gauze

wrung out of warm salt solution. Incision is made in a generally transverse direction over the most prominent part of the tumor. The myoma is shelled out and the incision closed by a figure of eight hemostatic suture of No. 1 iodized catgut. This effectively controls the oozing. The line of sutures is covered as well as possible with the uterine peritoneum or with a fold of the broad ligament if feasible, by Lembert suture of No. 0 iodized catgut, the knots being buried as well as possible. The second line of sutures is important in reducing the danger of adhesions."

Dr. Frick has successfully employed myomectomy in the subserous, intramuscular, and even the submucous myomata, and he believes that the operation is destined to a much wider use in dealing with fibroids in women at the child-bearing period.

LOUIS A. LEVISON, M. D.

ARTERIOSCLEROSIS, WITH REPORT OF OBSERVATIONS ON BLOOD PRESSURE.

Reed (Southern California Practitioner, Aug., 1919) summarizes his observations on this subject as follows: Exercise of all kinds from the gentlest to the most active and vigorous, is followed, after a brief rise of blood pressure and increase in the pulse rate (which can be made very slight and transient) by a decided fall of from five to fifty mm. of mercury, according to the severity and duration of the exercise and the condition of the patient. Generally the pulse rate increases as the pressure falls, but the gentler exercises, especially those against resistance carried out in accordance with the rules of the Schott Brothers, of Nauheim, will leave the pulse rate unchanged, or when rapid before, slowed and strengthened. As a rule the higher the pressure before, the greater is the fall after, the mild exercises. It is possible that cases complicated by serious renal disease may prove exceptions in this respect, but I have not had an opportunity of testing such cases thoroughly. The elaborate Schott rules are not necessary to obtain very favorable results except in the weakest patients. Ten to twenty minutes spent in making a variety of muscular movements, not more than two to ten or twenty of each kind, the number depending upon the degree of the cardiac tone (the weaker the heart the fewer and the more slowly to be made) will nearly always produce decided results. An attendant is not indispensable after the patient has been taught to resist, himself, by contracting moderately the muscle opposed to the one in action. Pulleys also can be adapted so as to give

the proper amount of resistance, but the patient needs to be cautious always not to overexert in any of these ways. The generous exercises do the most good in feeble patients.

Mental exertions have produced varying results, but never in my experience a lowering effect upon the blood pressure unless after exhaustion. When very severe or exciting it tends to raise the pressure (as do all the passions), but otherwise is likely to leave it unchanged.

During the period of digestion, from one to three hours after a simple, ordinary meal not including tea, coffee or alcoholics, I have found the blood pressure usually lowered, often decidedly, though it has sometimes been transiently raised before falling, as happens with exercise. Whenever, however, a flatulent distention has resulted, as especially during the life of dyspeptics, the pressure has been raised. The pulse has been always higher after meals.

The cumulative effect of any special diet is a different matter. An exclusive milk or meat diet has lowered the pressure in arteriosclerosis when previously high—in one of my patients decidedly—but the ultimate effect of the meat diet has been aggravation of the disease and vessels as shown by the nervous and other serious symptoms. Thus the almost universal advice of writers that these patients should eat sparingly, if at all, is justified by my observations.

In the great majority of my observations, as before mentioned, the blood pressure has been found very much higher shortly after arising than later in the day, especially in patients not confined to bed. This rise has been particularly marked in patients troubled with flatulence, but by no means confined to them. Various causes probably contribute to this. The reflex stimulation of the heart by the distention is possibly one cause, the absence of the pressure lowering influences of digestion and of the other activities of the day or evening, is probably another, and the tonic effect of the prolonged rest and sleep upon the heart must also be a factor.

No other observer seems to have noticed this usually marked difference between the evening and morning blood pressures and it is always to be borne in mind in managing important cases of arteriosclerosis.

The particular directions for the treatment of arteriosclerosis were very fully given in a paper presented by me to the American Climatological Association at its meeting in Old Point Comfort in 1909, and it would unduly lengthen this article to introduce them or repeat them here in any other form. They will be found in the transactions of that society for 1909, and also in the

California State Journal of Medicine for September of the same year.

INFLAMMATION.

Opie, Archives Internal Medicine, June, 1910. Opie's summary is as follows: Inflammation is a process which tends to render harmless an injurious substance; it has its site in the interstitial tissue of the body. This tissue consists of fixed cells and fibrillated substances and is penetrated by closed lymphatic vessels. With inflammation certain cells migrate through the wall of the blood vessels of the part and enter the spaces within the interstitial tissue. Some of these cells are destroyed; others penetrate the endothelial membrane which forms the lymphatic capillaries and hence are carried by way of lymphatic vessels to the regional lymphatic nodes.

Bacteria and many other injurious substances are attacked and ingested by the polynuclear leucocytes which migrate from the blood vessels. These leucocytes, often injured by the inflammatory irritant are in turn ingested by large mononuclear cells (macrophages) which quickly appear at the site of inflammation. The origin of these mononuclear cells is still undetermined. Ingestion of polynuclear leucocyte and other cellular material is begun at the site of inflammation and completed in the regional nodes of the lymphatics.

The ability of phagocytic cells to remove injurious material is dependent on the possession of proteolytic enzymes. Peculiar to the polynuclear leucocytes is an enzyme which, like trypsin, exerts its digestive action in an alkaline medium. The serum of the blood contains an antienzyme which restrains the action of this enzyme should it be set free by disintegration of the leucocytes; the action of the enzyme is thus limited to the cell. When enzyme is set free in such quantity that it overbalances the antienzyme of the exuded serum, suppuration occurs, for the purulent exudate has in virtue of its unrestrained enzyme acquired the power to soften and erode the adjacent tissues.

The mononuclear phagocytes which appear in the late stages of acute inflammation, the similar cells which appear in the regional lymph-nodes, and the cells of similar structure which constitute the greater part of tuberculous tissue contain an enzyme which, like pepsin, digests in the presence of acid. Such phagocytes are active at the site of inflammation, but their work is completed in the regional lymphatic nodes.

Inflammation is the process by means of which cells and serum accumulate about an injurious

substance and tend to remove or destroy it. This process does not include the regenerative changes which replace injured tissue by newly-formed parenchymatous elements or by new interstitial tissue. Present nomenclature of chronic disease contains many terms which are inconsistent with knowledge of the underlying disease. Terms such as "parenchymatous nephritis," "traumatic myelitis," acute "hemorrhagic pancreatitis" are applied to conditions which have not primarily the characters of inflammation; the term "chronic inflammation" is applied to complex morbid changes (e. g. cirrhosis, chronic nephritis, myocarditis, arteriosclerosis, etc.), in which inflammatory processes have an insignificant part.

THE HEART MUSCLE IN TYPHOID FEVER.

Hamman (The Archives of Internal Medicine, Oct., 1910). Hamman summarizes his article as follows: The anatomical lesions produced by typhoid fever in the heart and blood-vessels have long been known. While there is much diversity of opinion about the extent and frequency of the lesions, their occurrence and importance is unquestioned. In my study of forty-three hearts from patients dying of typhoid fever I was able to find some changes in practically all, although in most the lesions were not extensive enough to allow one to assume with certainty that the efficiency of the heart muscle was compromised. There is unfortunately no satisfactory evidence at hand to allow one to judge the functional capacity of the heart by the character and extent of the histological lesions, and frequently the two seem not to run parallel. In at least six of my cases both the fiber and interstitial lesions are so intense that I could hardly associate their presence with complete efficiency of the organ. I do not find any evidence of widespread change in the smaller branches of the coronary arteries but frequently periarteritis and endarteritis in the large and medium-sized branches. No doubt these lesions must in some degree interfere with the nutrition of the heart and are of importance both for the immediate efficiency of the organ and its future integrity.

There are certain symptoms during the course of an acute infectious disease which point directly to the presence of some cardiac lesion and often to cardiac insufficiency, notably irregularities of rhythm, and the physical signs of beginning dilation. Certain sudden deaths can be satisfactorily explained only upon the assumption of abrupt cardiac failure. Romberg has asserted that during the height of an infection the circula-

tory failure depends entirely on vasomotor paralysis. Even though the vasomotor system plays the important role, the work of Stejskal shows that the heart is not always perfectly efficient and that it cannot be entirely disregarded as a factor in the failure. It is during convalescence particularly that the symptoms of a damaged myocardium stand out most clearly. Such symptoms are not nearly so common after typhoid as after other infections, notably diphtheria, but they occur frequently enough to indicate the significance of the damage the heart has sustained.

Undoubtedly these lesions of the myocardium and of the arteries are of the greatest importance for the future health of the individual. We are being more and more deeply impressed with the significance of infectious disease in the production of chronic arterial and myocardial disease. Typhoid fever has not in this regard the same importance as rheumatism, syphilis, or diphtheria, but on account of its prevalence is a factor to be seriously reckoned with. The prevention of infectious diseases will probably prove one of the strongest prophylactic measures against the degenerative lesions of the circulatory system.

THE ETIOLOGY AND TREATMENT OF CHRONIC CONSTIPATION.

Kohn (*Therapeutic Gazette*, Oct., 1910). Kohn offers the following classification of chronic constipation:

A. Organic or Mechanical Causes.

1. Chronic sigmoiditis or proctitis.
2. Obstruction of the bowels by stricture, neoplasm, adhesions, volvulus.
3. Foreign bodies, hepatic or intestinal calculi.
4. Malformations of colon, sigmoid, or rectum.
5. Enteroptosis.
6. Fecal impaction.

B. Functional Causes.

1. Atony of the colon. (a) Sedentary habits; (b) irregularity of stool; (c) advanced age; (d) relaxation of abdominal muscles.
2. Impairment of secretions.
3. Intestinal spasms.
4. Increased digestion and absorption of food. (a) Improper diet; (b) hyperacidity of gastric juice.
5. Drug and enema habit.
6. Psychic influences. (a) Fear of pain in local inflammations; (b) cerebral excitement or pre-occupation.

Kohn states that atony of the intestine is too often assumed to be the cause of constipation. It is the primary cause only in a comparatively small number of cases, probably confined to advanced

years and marked cachectic conditions. Atony is sometimes secondarily induced by the prolonged action of other cause such as sedentary habits, irregularity of stool, accumulation of feces in the intestine. Repeated pregnancies with consequent relaxation or atrophy of the abdominal muscles may also lead to an atonic condition of the intestinal wall.

The secretions that are normally present in the intestinal canal aid in the maintenance of regular evacuations. This is especially true of the bile and the intestinal juice. Deficiency of bile naturally results from hepatic or biliary disease in which case the constipation is secondary. Of the intestinal secretions we know comparatively little, but it is evident that an atonic condition of the intestinal wall may be accompanied by insufficient stimulation of the secreting glands with consequent deficiency of lubricating fluid for the feces.

Considerable attention has been paid to the so-called spastic form of constipation which is supposed to be produced by a spasm of the bowel. The extreme example of this form is the constipation of lead colic. It is also seen in the constipated stages of mucous colitis. It is doubtful, however, if spasm plays a frequent part in the causation of the ordinary form of chronic constipation. Its importance here has probably been exaggerated. In cases in which spasm is a marked feature, we will usually have a neurotic individual, who complains of considerable abdominal pain of a colicky nature and in whom the spastic condition of the bowel can at times be felt. The feces will be of small calibre and quantity. After the spasm relaxes normal stools may be passed.

The most important and most frequent factor in the etiology of chronic constipation is to be found in the character of the diet. It is found that in the atonic form, the bulk of feces in proportion to the amount of food ingested is diminished. The bacterial content of the feces is small.

The rational treatment of constipation should be based on the underlying cause. The use of agar-agar in a shredded or finely divided condition is recommended. It may be given mixed with certain soft foods, such as apple sauce or mashed potatoes. In the stomach, the agar-agar absorbs water, swells up, and increases the bulk of the feces. Paraffin has also been recommended. Bran made up into palatable cakes are often valuable.

In "clean" surgical cases a rise of temperature to even no more than 99.5° or 100°, during convalescence after operation, always means something—it may be only serous retention.

COUNTY SOCIETIES

FIRST DISTRICT

E. S. McKEE, Collaborator.

An interesting symposium on exophthalmic goitre was held at the Cincinnati Academy of Medicine on October 24, 1910. Symptoms were treated of by H. L. Woodward; medical treatment, Allan Ramsey; surgical, W. D. Haines, ophthalmic, Victor Ray. Unfortunately the paper on pathology was not presented.

A motion to increase the dues of the Cincinnati Academy of Medicine on account of the State Society was lost and the increased assessment is to be taken out of the funds on hands.

A motion to withdraw from the State Society was lost.

The last meeting of the month being given up reports of cases, interesting cases were reported by Drs. C. T. Souther, B. M. Ricketts, and M. L. Heidingsfeld.

Adams County Medical Society met Wednesday, October 12, at the Florentine Hotel, West Union. Program was as follows: "Enteritis in Children," C. W. Osborn, Seaman; "Gastric Ulcer," J. E. Rogers, Peebles; remarks by the Councilor, Robert Carothers, Cincinnati.

The Academy of Medicine of Cincinnati met November 14, in memorial session for Dr. N. P. Dandridge. Talks were given as follows: "As a Colleague," Byron Stanton; "As a Friend," Dan Millikin; "As a Surgeon," J. C. Oliver; "As an Executive," A. B. Isham; "As a Staff Officer," B. K. Rachford; "As a Teacher," Julius Eichberg; "As an Adviser," C. R. Holmes.

Cincinnati Academy of Medicine program for September 26, 1910, case reports. October 3, Section on Specialties; paper, "The Education of the Deaf Child," John A. Thompson; paper, "Excision of the Tarsal Cartilage and Retro-Tarsal Fold for Advanced Trachoma—Presentation of Patient," J. H. Williams; paper, "The X-Ray in Mastoiditis," Sidney Lange. October 10, Surgical Section. Paper, "Surgery of Aneurism of the Thoracic Aorta and Its Branches," B. Merrill Ricketts. October 17, Medical Section. Paper, "The Recognition of Incipient Phthisis," Albert Faller; Discussion, Dr. Rockhill, Dr. Styx; paper, "Modern Treatment of Contagious Diseases," A. J. Bell; Discussion, Alfred Friedlander. October 24, Symposium on Exophthalmic Goitre—"Symptoms," H. L. Woodward; "Medical Treatment," Allan Ramsey; "Surgical," W. D. Haines; "Ophthalmic," Victor Ray. October 31, Case Reports.

November 7, Section on Specialties—Paper, "Soft Fibroma of the Conjunctiva, with Report of Case," Jesse Wyler; paper, (a) "Histogenesis of Black Tongue and Cutaneous Horns" (Demonstration from lantern slides). (b) "Present Status of '606' Ehrlich-Hata in Treatment of Syphilis," M. L. Heidingsfeld. November 14, Surgical Section—Paper, "Rupture of Urethra Due to Organic Stricture, with Report of Cases," E. O. Smith; paper, "Dysmenorrhea," J. W. Rowe. November 21, Medical Section—Address, "Cardiac Irregularities," Arthur D. Hirschfelder, Baltimore, Md. November 28, Case Reports. New members elected last month: W. R. Abbott, Miami Medical College, 1908, City Hospital; B. H. Gaines, Medical College of Ohio, 1909, 325 Broadway; L. H. Newbergh, Harvard, 1908, The Ortiz, Fourth and Sycamore.

SECOND DISTRICT

R. H. GRUBE, Collaborator.

Clark County Medical Society met November 14, at 8 p. m. The meeting was devoted to report of cases and the final report of the Second Councilor District meeting. The first half of the winter session will be devoted to the study of syphilis. The meetings will take place on the second and fourth Monday evenings of the month.

The regular meeting of the Clark County Medical Society was held in the Commercial club rooms, Fairbanks building, on November 28, 1910. The program follows: "General Diagnosis," P. E. Cromer; "Syphilis of the Eye, Ear, Nose and Throat," F. A. Hartley; "Syphilis as a Factor in Social Life," W. B. Patton; "Congenital Syphilis," H. B. Martin.

THIRD DISTRICT

H. B. GIBBON, M. D., Collaborator.

At the meeting of the Allen County Society on October 4, R. V. Dickey presented the subject of "Broncho-pneumonia" in a very interesting manner. The doctor called attention to the fact that so far as the textbook was concerned with this subject, one was just as good as another since all were practically the same—the newer ones being copies of the older ones.

The use of the poultice, or any other heavy application, was condemned; anything of such nature that there could be no danger of chilling the patient as so often has happened with the poultice. In case of delayed resolution, calcium iodide was recommended.

A good discussion followed, which might be

designated as of the "safe and sane" variety, since no one advocated any of the unusual or extreme measures which have been tried in some of these cases.

On October 18 Mr. Clyde E. Lepley, a practical dairyman was present and gave the society his ideas of what a first-class dairy is and how it should be conducted. Mr. Lepley learned the business in some of the large dairies in the East, such as the Sheffield and Borden's and proposes establishing in the vicinity of Lima a dairy which shall be sanitary in every respect; every cow to be carefully examined and tested before being placed in the herd and strict attention to every detail in the production and handling of the milk till it is placed in the consumer's hands.

The project was enthusiastically endorsed by every one present and further action was taken which it is hoped will result in a material improvement of the milk supply of the city.

L. H. Hanman, of West Cairo, read a paper on "Alkaloidal Therapy" in which many advantages of this form of medication were pointed out. Many of the members present had no experience with the alkaloids, while one member was in complete accord with the essayist, another used this form of therapy in part, still another called attention to the fact that the effect of the *whole* drug must not be expected from the administration of an alkaloid—tincture of opium often serving much better than morphine, nuxvomica than strychnine, etc.

J. R. Tillotson reported the meeting of the state auxiliary committee, and a protest against the optometry bill was adopted.

At the meeting of the Allen County Society on November 3, Iva Lickly read a paper on "Accidents in the Operating Room." The paper was a comprehensive one, the essayist's experience as an anesthetist qualifying her to speak from definite knowledge of this subject.

How to deal with shock and other conditions which must sometimes be met in the operating room, was an interesting feature of the paper, but more important was the emphasis put upon proper preliminary measures that the number of accidents may be reduced to the minimum.

The discussion following was instructive and covered more than the usual field. One held that the action of strychnine was too slow to be of service in case of shock; the answer was that if strychnine was of no benefit it was because the patient was so profoundly shocked that the nervous system could not respond to any stimulant.

Another pointed out a fault of many operating

rooms in that the room itself is too warm, while no heat is applied directly to the patient while on the table; that hot water bottles, or other means, should keep the patient's body at proper temperature while the room should be better ventilated.

At the meeting on November 15 T. M. Johnson read a paper on the subject, "Has the Science of Medicine Kept Pace with the Allied Sciences,"

The doctor stated that there was something to be said on both sides of the question and in order to bring out more fully what might be said, he would take the unpopular side as no doubt many would be ready to espouse the affirmative.

The comparison of medicine with related sciences was not taken up, but it was urged that we take stock of what real knowledge we have of the subject, put it alongside of what our forbears knew, then compare progress with other sciences.

It was declared that with some notable exceptions, such as serum therapy, our ways of dealing with disease are but little better than were the methods of the fathers.

Needless to say, a very stirring discussion followed.

W. B. Van Note also read a paper giving the therapeutics of belladonna with special reference to the use of its alkaloid in his work as an oculist.

The Logan County Medical Society held its annual banquet at Hotel Logan on November 3. Herman Hoppe, of Cincinnati, was the guest of the society and delivered an address on "Nature, Diagnosis and Treatment of Functional Nervous Diseases, Especially Neurasthenia." The address was an excellent one and a vote of thanks was given Dr. Hoppe by the society.

FOURTH DISTRICT

TODD DUNCAN, M. D., Toledo.

The Section on Pathology of the Academy of Medicine of Toledo and Lucas County met October 14, 1910, at 8:15 o'clock in the auditorium of the Y. M. C. A. The program was as follows: "Demonstration of Specimens;" "Hives in its Relations," C. E. Price. Discussion opened by Edwin D. Tucker.

The Section on Surgery of The Academy of Medicine of Toledo and Lucas County met on October 28, 1910. The following was the program: "Diagnosis of the Chronic Surgical Lesions in the Upper Abdomen," C. N. Smith; discussion opened by Willard J. Stone. "What Should be the Attitude of the Profession Toward the Non-Medical Cults?" Chas. W. Moots; discussion opened by W. H. Snyder.

Section on Pathology of the Academy of Medi-

cine of Toledo and Lucas County met November 11, 1910. The program follows: Pathological demonstrations and case reports, Drs. Alderdyce, Daniels, Foster, Tenney and Souder.

The Section on Surgery of the Academy of Medicine of Toledo and Lucas County met November 25, 1910. The following program was given: "The Acute Abdominal Manifestations of Syphilis," Louis A. Levison; discussion opened by C. N. Smith and R. P. Daniells; "Post Operative Roentgen Treatment of Carcinoma of the Breast," Harry W. Dachtler; discussion opened by W. H. Fisher.

A general meeting of the Academy of Medicine of Toledo and Lucas County was held on Friday evening November 4, 1910, at 8:15 o'clock in the auditorium of the Y. M. C. A.. The program follows: "Acute Anterior Poliomyelitis," by Henry O. Jess of, Cleveland. The doctor's paper dealt largely with mechanical and surgical treatment of spinal paralysis.

The Section on Medicine of the Academy of Medicine of Toledo and Lucas County met on Friday evening November 18. The following program was given: "A Caution Regarding Heroin and Codeine," Waldo M. Bowman; discussion opened by Charles W. Moots; "Report of Case: Urticaria Pigmentosa," Jeremiah Metzger; discussion opened by Edwin D. Tucker; "Report of Cases: Cretinism and Mongolian Idiocy," B. B. Brim; discussion opened by H. E. Smead.

SIXTH DISTRICT

A. J. MARCH, M. D., Canton.

The 152d session of the Union Medical Association of the Sixth Councilor District was held in the assembly room of the Dollar Bank building, Youngstown, on Wednesday November 9, 1910. The meeting was well attended and full of interest. Dr. Dan Milliken, of Hamilton, Ohio, was the guest of honor. His address on "The New Trails in Medicine" was a treat which everybody enjoyed hugely. Dr. Milliken can always feel assured of a warm welcome in the sixth district. Visiting members were royally entertained at lunch by the Youngstown physicians at the Elks Club dining-room.

The next meeting of the society will be held in Akron on the second Tuesday in February. This being the annual meeting, is always looked forward to with much interest. It will in all probability be a "hummer."

Every member on the program was present. Following are a few brief abstracts of papers read: "Accidental Surgery—Past, Present and Future," by C. C. Booth, Youngstown. After a

brief review of past, or old methods in accidental surgery, he outlined some of the present-day methods for handling accidental wounds. Among other things, he said keep away water. Remove dirt and grease with benzine. Dry with gauze. Then apply tincture of iodine. Ligate bleeding points. Suture with silkworm gut. Drain as little as possible. Apply over wound perforated wax paper, previously rendered aseptic by solution of bichloride of mercury. Dress with sterile gauze (not cotton), just enough to protect wound from dirt. Allow as much air to reach it as possible. Adjust fractures accurately—even if making open wound is necessary. (Have on hand a set of Dr. Lane's bone plates.) Apply a plate or wire at once, if necessary. Remove dressing in two or three days. Apply iodine and re-dress as before. If finger nails are pulled off, dress raw surface with 10 per cent balsam peru in sterilized castor oil. The rest of the finger dress with iodine. Leave one week before changing. In burns of first degree do not open blebs, but apply gauze and bandage; then saturate with picric acid solution or sat. sol. of Epsom salts.

"Some Means of Preventing Post-operative Shock," A. B. Walker, Canton. Among other things the speaker said that operative surgery with many men has become a fad. More men are operating, and more operations are performed today than in years before in the history of medicine. Whether necessary or unnecessary is not for me to say. To prevent shock it is necessary to have the patient in the best condition possible—physically and mentally. To produce best psychic effect it is important that the patient have implicit confidence in both surgeon and anesthetist. Have everything ready beforehand because delay at any point is harmful. Make preparation on the operating table before anesthesia, because this helps to keep the patient's mind engaged. Open bowels, but don't overdo. If urine is over 1028 or under 1012, treat first. Previous to the day of anaesthesia surgeons worked as rapidly as possible. But now we are sometimes tempted to be too deliberate, to the detriment of the patient. Morris claims that the patient gains resisting power during the first fifteen minutes of anaesthesia. But after that loses. So as the rule is "Get in, get out, get away, and give the patient a chance."

Discussion: Dr. Ryall, Wooster, believes in having the patient as composed as possible. Operate quickly so as to conserve patient's resistive power. For after treatment nothing is equal to normal saline solution. Dr. Schuffel, Canton, does not approve of preparing patient on operating table prior to anaesthesia, but bring him in dur-

ing subconscious state, so as to save time. In major operations gives hypodermic injection of morphine half hour before anaesthesia; takes off the "edge." Know your landmarks before anaesthesia. Avoid farewell scenes if possible. Before leaving the table, give the patient from four to eight ounces of normal saline solution by the "drop method."

Dr. Milliken, Hamilton, said the room should be kept as nearly 100 as possible. Keep the patient warm, but the surgeon cool. Heat is the great restorative in shock. The anaesthetic should be given warm. The responsibility of the anaesthetist is, as a rule, greater than that of the surgeon. If the case is desperate, the surgeon refuses to operate. But not so with the anaesthetist.

"Spina Bifida," by H. Blankenhorn, Orrville. My 124th obstetric case was one of spina bifida. So the 182nd and 266th. My aged associate said it was the first he ever saw. Three in a short experience and none in a long one. Statistics claim one in 630. It is the most frequent malformation of the central nervous system. It is a failure of the medullary groove to unite. The vertebra develops from four primary centers—one for each lamina at six weeks, and two for body at eight weeks.

The gap caused by this failure may be confined to one or more vertebrae. The tumor may vary from size of a button to that of a football, with a pedicle. Its wall varies from a thick, tough skin to thin, translucent tissue paper like membrane, which may rupture during labor. Prognosis is dangerous. Some die before birth, and the others soon after. If covered by integument, may recover. Treatment: Clamping has proved unsuccessful. Puncture, removing some of the fluid, then injecting iodine and glycerine. Brainard, of Chicago, in the '50's treated successfully a number of cases by injecting watery solution of iodine and potassium iodide. Later Morton advocated use of iodine grains 10, potass. iodide grains 30, and glycerine oz. (fl.) 1. Of this he injected half a drachm into the sac, passing the needle through healthy skin. Covered puncture with collodion and cotton and applied gentle pressure. In few days, if all symptoms of irritation had disappeared, he repeated the injection.

"Tuberculin in the Diagnosis and Treatment of Surgical Tuberculosis," by Walter G. Stern, Cleveland.

There are two classes of tuberculin reactions both depending upon the phenomenon of anaphylaxis.

1. General reaction otherwise called subcutaneous test.

2. Local reactions.

- a. Prick reaction accurate but not used.
- b. Detre differential reaction—discredited.
- c. Moro inunction test not to be relied upon.
- d. Calmette eye reaction—accurate in revealing an active tuberculosis.
- e. v. Pirquet skin reaction—very delicate and reveals tuberculosis past and present.

The general or subcutaneous reaction is the most accurate of all, but is also the most dangerous and difficult. The patient must be rendered fever free for forty-eight hours when a single injection of from 0.5 to 5.0 mg of Koch's Old Tuberculin is injected subcutaneously. A febrile reaction occurs within twenty-four to thirty-six hours.

In making the Calmette eye test, instill one drop of a 1 per cent solution of Koch's Old Tuberculin into a normal eye. If positive, a reddening of the caruncle and conjunctiva takes place within twenty-four hours; care must be taken to examine the eye and to elicit a past history of corneal ulcer, etc., etc. In doubtful cases consult an ophthalmologist as to the condition of the eyes. If these precautions be followed, no untoward effect need be feared.

The v. Pirquet skin reaction requires the slight scarification of the arm in three places—for which a dental burr is a convenient instrument—and the rubbing in, of a small drop of pure Koch's old tuberculin in the upper and lower abrasions. The real reaction is not usually as vivid as the colored lithographic reproductions one so often sees. The upper and lower abrasions are distinctly different than the control, both to sight and touch.

The author recommends for diagnostic purposes the following combination of the Calmette v. Pirquet and subcutaneous test which he believes to have originated, and which he has tried out in about 450 cases with astonishingly accurate results. If the patient be clinically suspicious of being tubercular both the v. Pirquet and the Calmette tests are performed at one and the same time. If within forty-eight hours both tests are positive, tuberculosis is diagnosed; if they are both negative, the patient is declared to be free from tuberculosis. If one is negative and the other positive, then the patient is put to bed and when fever-free a subcutaneous test is made. If this proves positive, the patient has tuberculosis; if negative, the patient has not tuberculosis. This method of obtaining two out of the three tests positive or negative in every case, is very accurate and convenient and usually avoids the necessity of making a subcutaneous injection.

For treatment he begins with a dose of 1/10000 mg. of Koch's new tuberculin, bacilli emulsion,

in children, and a dose of 1/1000 mg. in adults. He gives one injection each week, increasing the dose *weekly* by the *amount* of the *original injection*. He warns against many ready-made serial dilutions on the market in which the increase dosage is always a *fixed quantity* irrespective of the *strength* of the solution.

He lays down the following rules for giving tuberculin:

- 1. Avoid all reactions and untoward results.
- 2. Do not repeat a dose which has caused a reaction. Wait one week and begin with 1/10th former dose.
- 3. Do not give injections oftener than once a week.
- 4. Do not use tuberculin in febrile or hopeless cases.

5. *Never* leave off or neglect the other medical and surgical measures which have always been the mainstay in the treatment of this malady. Use tuberculin in conjunction with the treatment you would have given if you didn't have it.

Tuberculin is no specific or cure-all, but with its aid the author's cases have done better, been under treatment a shorter time, have had less complications than before.

The bacterial vaccines both autogenous and stock, are useful aids in combating any secondary infection which might keep alive old fistulae and sinuses.

"The Relation of the Coroner to the Medical Profession," by H. S. Davidson, Akron, coroner for Summit county. The office is as old as governments. Outside of America it has relative importance only. The coroner's investigation forms the principal basis for prosecution where the case demands it, and, on the other hand, if not sufficient evidence is found, the state is saved the expense and the court's work, which would have to be done. The relation of the office to the medical man has been misunderstood. The present statute is as old as the constitution. It is incomplete and ambiguous, which has caused much misunderstanding and misapprehension. The office should always be occupied by a qualified physician, for the reason that he understands the human body and the various conditions that may lead up to the cause of death. The coroner can also make his postmortem work helpful to the medical profession, inasmuch as observation of healthy tissues and organs (as in death following accident or violence) is more helpful for diagnosis than that of the pathological. The coroner should be compelled to do postmortem in every case where he is in grave doubt as to the cause of death, in order to make vital statistics authentic. If it is worth doing at all, it is worth doing

well. In my four years of office I have viewed over 600 bodies. This experience convinces me that more work should be added to the office so as to make it more useful. Enough to occupy the physician's whole time, then compensate him accordingly, on a salary basis, fixed according to population of the county. At present it is on the fee basis, and miserably low at that. The office should include that of adjudging sanity cases, which is now done by a probate court, and necessitates summoning a medical commission to examine the case. He should also have power to investigate all causes of death where there is doubt, or where no licensed physician was in attendance. This would be one effectual way of adjusting irregular practice, and punishing those who neglect to care for their dependents. Recently I examined a case, a lady who died upon the treatment table of a magnetic healer. Another, a middle aged man, suffering from inflammation of the gall bladder and duct, who was being adjusted by a "Chiropractor." The field for humanitarian work along this line is great. Our statutes on this subject need revising badly, and it is incumbent upon the medical profession to suggest the way and help bring it about.

Dan Milliken, of Hamilton, in his usual masterly way delivered an address upon "New Trails in Medicine."

The Portage County Medical Society met November 10, 1910, in the office of C. Jaster in Ravenna. Ten members were present. S. H. Stevens, of Aurora, was elected to membership. E. B. Dyson, of Rootstown, read a paper entitled "Myasthenia Gastrica." Specimens presented before the society were: B. H. Nichols, a book of formularies and prescriptions of various remedies used by a physician who practiced in this section in 1837. C. O. Jaster, a book on anatomy, published in Latin, in 1683, and which contains articles written by Nicolai Struones and Marcelli Malpighi.

SEVENTH DISTRICT

S. O. BARKHURST, M. D., Collaborator.

The seventh annual meeting of the Seventh Councilor District was held in Uhrichsville November 1, 1910. The program was as follows: "Some Points in Diagnosis and Treatment of Nervous and Mental Diseases," Theodore Diller, Pittsburg, Pa.; "Anterior Polio-Myelitis, Diagnosis and Treatment," J. C. M. Floyd, Steubenville, Ohio; "The General Practitioner," J. Howard Davis, East Liverpool, Ohio; "The Medical Profession and the Public," Ben R. McClellan, Xenia, Ohio; "Bier Treatment—Emergencies, Minor

Surgical and Moist Dressings," Tom B. Marquis, Lisbon, Ohio; "Diagnosis and Treatment of Pleural Effusions," Jesse McClain, Coshocton, O.; "Adenoids, with Presentation of Cases Demonstrated by the Hay's Pharyngoscope," G. L. King, Alliance, Ohio; paper, C. U. Paterson, Uhrichsville, Ohio. The annual dinner was held at the Wyatt Hotel. R. E. Skeele, Cleveland, Ohio, was present and gave an interesting after dinner address. The following officers were elected for the ensuing year: President, S. J. Podlewski, Steubenville, Ohio; Secretary, S. O. Barkhurst, Steubenville. The next meeting will be held in Steubenville.

EIGHTH DISTRICT

J. R. McDOWELL, Collaborator.

The meeting of the Guernsey County Medical Society, followed by a banquet, held in the National Hotel Monday evening October 24 was attended by practically all the physicians of the county, and many from the country. At the conclusion of the meeting the wives of the physicians were admitted and the meeting adjourned to the dining-rooms of the hotel where Mrs. Judy served an elegant three-course banquet.

The meeting of the society was presided over by the President, C. A. Frame, and an excellent paper was read by Edward C. Brush, of Zanesville. I. W. Keenan was elected delegate to the district medical meeting to be held in Zanesville November 25, and an excellent program was prepared for the next meeting of the Guernsey County Medical Society to be held November 10. Those selected to read papers at that meeting were G. W. Hixon, A. G. Ringer and Fred Harrison.

After extending Dr. Brush a vote of thanks for his presence and the excellent paper, the meeting adjourned, and the members present accompanied by their wives entered the dining-rooms of the hotel, where the banquet was served. Dr. Frame was master of ceremonies, and called on a number present for remarks. Dr. Brush spoke on the importance of a good medical society, and remarks were made by Fred Lane, Dr. Rowles and others.

The interior of the dining-rooms and the tables were beautifully decorated with autumn flowers.

The program for the meeting of the Muskingum County Medical Society at Zanesville on November 9 consisted of a paper by R. B. Bainter, of Zanesville, on "The Relation and Law of Sex," and a paper by E. C. Logsdon, Zanesville, on "Race Suicide." These were papers on rather

unusual subjects for a medical society and brought forth a great deal of discussion and many varying opinions.

The seventh annual meeting of the Eighth Councilor District Medical Association was held in Zanesville, Ohio, November 25, 1910. The program was as follows: Morning session at 9 o'clock at the Good Samaritan Hospital. C. F. Hoovef, Cleveland, conducted a medical clinic with the following cases: Syphilis of central nervous system; muscular atrophy; anterio-poliomyelitis; ascites, etc. J. H. Jacobson, Toledo, gave a surgical clinic in the operating room. Lunch—12 o'clock. The Sisters of the Good Samaritan Hospital served a lunch at the hospital. Afternoon session at the High School auditorium, Sixth and North streets, at 1:30 o'clock. Edward Ochsner, Chicago, "Septic Infections of the Extremities;" C. F. Hoover, Cleveland, "Syphilis of the Central Nervous System;" Geo. W. Kosmak, New York, "Treatment of Abortion in Private and Hospital Practice;" E. C. Brush, Zanesville, "A Tuberculosis Sanitarium for the Muskingum Valley." A banquet at 6 p. m. at the parish house of St. James Episcopal Church was given by the Muskingum County Medical Society. Evening Session—Address by R. E. Skeel, Cleveland, President of the State Society; D. J. Price, Newark, Ohio, "Campaign;" I. W. Keenan, Cambridge, O., "Fracture of the Skull."

The following guests were present: Fred Fletcher, John Dudley Dunham, James M. Rector, Andre Crotti, A. M. Steinfeld, Columbus, Dr. Axline, Lancaster. Ninety-six were present at the afternoon meeting. The following officers were elected for 1911: President, A. R. Cain, Cambridge; W. E. Wright, Secretary and Treasurer. The next meeting will be at Cambridge in 1911. Dr. Kosmak, of New York, was detained by illness, but forwarded his paper which was read by H. T. Sutton. R. E. Skeel, of Cleveland, President of the Ohio State Association was present and addressed the society. The following resolutions were presented to the society:

WHEREAS, Death has invaded the Eighth Councilor District Medical Society and removed from us the first President of this society in the person of J. D. Axline, a former honored member of the Ohio Legislature and one of the best known practitioners in Southeastern Ohio; be it

Resolved, That we hereby make public recognition of our appreciation of his services both as a citizen and physician, that we feel that the medical profession, by his death, has lost a valuable member, the public a valuable citizen, and his clients a true advocate and faithful friend; and be it further

Resolved, That these resolutions be spread upon the minutes of this society, and published in the

report of this meeting in the Ohio State Medical Journal.

Signed:

N. T. McTeague, New Lexington,
Chas. H. Higgins, Zanesville,
R. B. Bainter, Zanesville.

WHEREAS, This society has learned with deep sorrow of the recent death of Dr. D. N. Kinsman, well known to all of us, and a beloved teacher of a large majority of the members of the Eighth Councilor District Society; be it

Resolved, That in recognition of his worth as a physician, teacher and citizen, we hereby make public our appreciation and bow our heads in sorrow at our great loss, while we submit unwillingly to the fate that in the end must befall us all, and be it further

Resolved, That these resolutions be spread upon our minutes and published in the Ohio State Medical Journal.

N. T. McTeague,
Chas. H. Higgins,
R. B. Bainter.

NINTH DISTRICT

S. P. FETTER, M. D., Collaborator.

The eighth annual session of the Ninth District Medical Association was held at Pomeroy, Ohio, November 3, 1910. W. H. Henry called the meeting to order promptly at 1 p. m. The first paper on the program was by S. B. McKerrihan, of Portsmouth, who read a very scholarly paper on Raynaud's disease with report of a series of cases. The next paper was by G. G. Edwards of the Ohio Hospital for Epileptics, on the "Differential Diagnosis Between Pleurisy with Effusion and Lobar Pneumonia," a very timely paper.

The next paper was by S. J. Goodman on "The Preservation and Repair of the Female Perineum." He emphasized to look out for the shoulders and also the speed of child through the birth canal. A good paper which brought forth a very spirited discussion among the physicians present.

F. F. Lawrence, of Columbus, delivered a fine lecture on "The Gall Bladder and Stomach Trouble," which was enjoyed to the uttermost and greatly appreciated by the members of the Ninth District Society. F. L. Watkins, of Columbus, gave a masterly talk on "Vital Statistics," which indeed was very interesting.

"The Dynamic Force and Influence of Medicine," by J. F. Roush, of Pomeroy, and "The Misuse of Drugs," by D. W. Davis, of Wellston, were two papers which every one was glad to hear. It would, indeed, have been a treat for Christian Scientists and other fadists to have heard; they at least would have learned much.

Wills, of Omega, told how to use hydrargyrum in diseases of children, and H. S. Reger, of Iron-ton, how to remove faucial tonsils.

The banquet which followed was a success in more ways than once, not only as epicurean repast, but for the many witty remarks that were brought forth during the toasts.

The meeting was a great success and every one was glad they were there, not a moment of precious time wasted. Next place of meeting is Jackson, Ohio. These officers were elected for 1911: President, I. P. Seiler, of Piketon; Secretary, W. J. Ogier, of Wellston.

TENTH DISTRICT

FRED FLETCHER, M. D., Collaborator.

The Delaware County Medical Society met Friday evening November 4, 1910, at 8 o'clock, at the court house. Program: "Lumbar Puncture," J. H. J. Upham, Columbus.

The regular monthly meeting of the Knox County Medical Society was held in the assembly room of the Y. M. C. A. Building on Friday November 11, 1910. The program was as follows: "Etiology and Early Diagnosis of Syphilis," John R. Claypool; "Etiology and Early Diagnosis of Arteriosclerosis," R. E. Cole; "Prophylaxis of Diseases of the Arteries," W. H. Eastman.

Columbus Academy of Medicine—Meeting, November 7. "Reflexes," David N. Kinsman. Discussion by Drs. Deuschle, Morehouse and Harding. "Peritoneum," C. A. Howell. Discussion: Drs. Means, H. A. Baldwin and J. F. Baldwin.

Meeting, November 14. "Symposium on Ectopic Pregnancy." "Etiology of Ectopic Gestation," Yeatman Wardlow and J. F. Baldwin. "Diagnosis of Ectopic Gestation," T. W. Rankin. "Ruptured Tubal Pregnancies. When and How Shall We Operate?" Discussion by Drs. E. M. Gilliam, W. J. Means, B. R. McClellan (of Xenia), C. S. Hamilton, André Crotti, F. F. Lawrence and S. J. Goodman. "Experiences with Tubal Pregnancies and Report of Unusual Cases." Discussion by Drs. Barnhill and Lawrence.

Meeting, November 21. "Neurological Symposium." "Nature, History and Etiology of Hysteria," David N. Kinsman. "Symptomatology," George Stockton. "Diagnosis and Treatment," W. D. Deuschle. General discussion by Drs. E. E. Gaver and Harding.

Meeting, November 28. "Symposium on Nephritis." "Pathology—Presentation of Gross Specimens," Ernest Scott. "Causative Factors and Early Recognition," J. H. J. Upham. "Significance of Urinary Findings," E. J. McCampbell. "Circulatory Manifestations," Frank Winders. "General Treatment and Management of Uremia," G. M. Waters. General discussion.

A memorial meeting was held, November 27, at 3 o'clock in the Auditorium, Columbus Public Library, to honor the memories of Drs. David N. Kinsman and George S. Stein. J. A. Van Fossen, President of the Columbus Academy of Medicine, presided. The following addresses were made: "Dr. Kinsman, the Teacher," by J. H. J. Upham. "Dr. Kinsman, the Advisor," by J. M. Dunham. "Dr. Kinsman, Physician and Student," by T. W. Rankin. "Dr. Kinsman, Friend and Associate," J. W. Wright. "Dr. Kinsman, Colleague and Friend," by F. F. Lawrence. Remarks were made by Starling Loving and J. F. Baldwin.

J. F. Baldwin spoke of the "Life and Work" of Dr. Stein.

Committees were appointed to draft suitable resolutions to be presented at the next regular meeting, December 5.

Meeting, December 5. "Symposium—Naso-Pharynx." "Naso-Pharynx," C. P. Linhart. "Frontal Sinus," R. Blee Smith. "Ethmoidal Cells," A. B. Nelles. "Sphenoidal Sinus," W. K. Rogers. "Maxillary Sinus," F. L. Stillman.

General discussion: Drs. Brown, Means, Clark and Blake.

Seventh Annual Meeting of the Tenth District Medical Association, Thursday, December 1, 1910 (2 o'clock), Auditorium, Columbus Public Library (Carnegie). Local members of the profession devoted the morning in the giving of Special, Medical and Surgical Clinics in the various hospitals of the city. Physicians were requested to register at any of the hospitals, when a ticket was given for the luncheon. Program—Morning Session: Hospital Clinics from 10 to 12:30 o'clock. A "Heart Clinic" was given in the Medical Library Room, Carnegie Library (ground floor) at 10 o'clock. The work outlined for the morning was found bulletined in each of the hospitals. Luncheon from 12:30 to 2 o'clock, Neil House and Southern Hotel. (Tickets were given on registration.)

Presentation of papers. Auditorium, Columbus Public Library (Carnegie), at 2 o'clock (State Street and Grant Avenue). "Typhoid Fever—Report of Interesting Case," Gilbert E. Robbins, Chillicothe. Discussion, W. H. Christopher, London. "Diagnosis of Incipient Tuberculosis of Bones and Joints," Cassius M. Shepard, Columbus. Discussion, W. J. Means, Columbus. "Ectopic Gestation," Arthur J. Willey, Delaware. Discussion, F. C. Larimore, Mt. Vernon. "Surgery of the Upper Abdomen," Charles S. Hamilton, Columbus. Discussion, F. F. Lawrence, Columbus. "Diagnosis and Treat-

ment of Acute Anterior Poliomyelitis," J. H. J. Upham, Columbus. Discussion, H. E. Jones, Circleville. "Medical Reserve Corps of the Army," Clark G. Axline, Lancaster. Discussion, Major H. C. Fisher, Columbus Barracks. "Neuritis," Cyrus W. Chidester, Delaware. Discussion, C. D. Mills, Marysville.

NEWS NOTES

The Cincinnati Academy of Medicine held a memorial meeting in honor of N. P. Dandridge on the evening of November 14, 1910. Speeches were made by Byron Stanton, Dan Millikin, J. C. Oliver, A. B. Isham, B. K. Rachford, Julius Eichburg, C. R. Holmes, Rev. Frank Nelson, Attorney Edward Colton, Attorney E. H. Pendleton and Mrs. Tate and Greiwe. Dr. Dandridge was connected with the Cincinnati Hospital for thirty-four years. He had been President of the Cincinnati Academy of Medicine, Ohio State Medical Society, American Surgical Association. Besides this he was a member of the American Medical Association and Fellow of the Academy of Surgery of Philadelphia. He was for a number of years professor of surgery in the Miami Medical College and surgeon to the Children's Hospital of Cincinnati. Dr. Dandridge was unmarried.

The Cincinnati Branch of the American Chemical Society met at the Hotel Sinton, Cincinnati, Saturday November 12, 1910. They were shown the new Cincinnati water works and in the evening a banquet was given in honor of the President of the American Chemical Society Wilder D. Brancroft, professor of chemistry in Cornell and the visiting sections. The following were the speakers: Joseph W. Ellms, President of the Cincinnati section; Professor John Uri Lloyd, the chemist and author; Professor Ira Remsen, President of Johns Hopkins University; Charles W. Dabney, President of Cincinnati University; Professor John W. Shearer, President of the Ohio Mechanics Institute; Professor A. Oberhammer, of the University of Vienna and President of the Austrian Geographical Society; the Presidents of the Indiana, Louisville and Cleveland Sections, and the response by Alfred Springer, of Cincinnati. An address was delivered by Professor Brancroft. Many medical men were in attendance.

The Union District Medical Association met at the Oxford Retreat, the guest of the superintendent, R. Harvey Cook, on October 27, 1910. The attendance was unusually good, reaching seventy-five. The address of the President, C. S.

Bond, of Richmond, was what might be considered a "roast." He discussed the frequency of unnecessary operation, underbidding, soliciting business and divisions of the fees. He said that the remarks did not apply to those present, but some seemed to fit. A classic paper on "Typhoid Fever" was read by D. E. Barnett, of Homer, Ind. "Headache" was the subject of a paper by A. C. Carney, of Hamilton. "Intestinal Toxaemia" was the subject of a paper by Milton H. Mack, of Chicago. "The Psychical Basis of Mind" by B. F. Beebe, Cincinnati. "The General Practitioner as Specialist," by Dr. Garrett Pigman, of Liberty, Ind.

At the dinner which was elegant in every detail and was served by a double dozen attractive young ladies from the Western Female Seminary, an eulogy was delivered on Dr. George F. Cook recently deceased superintendent of Oxford Retreat by Dan Millikin, of Hamilton. R. Harvey Cook was elected President and P. M. Sater, of Hamilton, Secretary.

The American Public Health Association, composed of representatives from the United States, Canada, Mexico and Cuba, will hold its 1911 meeting in Havana, Cuba, from December 4 to 9. The prospect of having the association again in Havana has aroused the warmest interest among the physicians there, the Secretary of Sanitation, Dr. Varona, being particularly interested. The Academy of Medicine has offered its building for the general section meetings. The Hotel Sevilla will be the headquarters of the association. A few years ago a meeting in Havana would probably have discussed yellow fever. The changed situation in Cuba with respect to that disease is shown by the fact that yellow fever has been so completely extinguished on the island that the local physicians desire rather that tuberculosis be given the most prominent place. The question of the milk supply will also be considered.

It is hoped at this meeting that the recently organized sociological section, and the section on sanitary engineering, which was tentatively authorized by the Milwaukee meeting, may be put upon substantial foundations.

The program for the eye, ear, nose and throat section at the coming meeting at Cleveland will be restricted to fewer papers than we have had heretofore. Programs for the last three or four years have been too long to do full justice to our essayists or discussants. This year we want fewer papers so we can allow a little more time for each paper and more time for its discussion. Those desiring to offer a paper at the Cleveland

meeting are earnestly requested to notify the Secretary of their intentions at once. Address all communications pertaining to the program to the Secretary, Wade Thrasher, 401 Provident Bank Bldg., Cincinnati, Ohio.

Arthur B. Smith announces his removal from the Y. M. C. A. building to rooms 706-707 Fairbanks building, Springfield, Ohio.

Arthur M. Hauer wishes to announce to the profession the opening of an office at 220 East State street, Columbus, Ohio. Practice limited to diseases of eye, ear, nose and throat.

The Obstetrical Society of Cincinnati held its regular meeting for October at the residence of W. D. Porter. The paper of the evening was by J. C. Cadwallader on "Puerperal Sepsis", which was extensively discussed by those present.

The medical college of Ohio Alumni Association held its October meeting at the automobile rooms the guests of Drs. Good, Hausser and Ford. Starr Ford, President; Sydney Lange, Secretary. C. A. L. Reed addressed the meeting.

The Miami Valley Medical Association held its fiftieth annual meeting at Dayton October 27, 1910; being the jubilee meeting, about fifty members were in attendance, about one-fourth being from Cincinnati. The following officers were elected: President, W. W. Eussey, Dayton; Vice-President, J. E. Studebaker, Springfield; Secretary, Rome Webster, Dayton; Treasurer, W. W. Dickerson, Dayton; Censor, R. B. House, Springfield. The next session will be held in Cincinnati in May, 1911.

The Miami Valley Medical Society held its meeting at Loveland October 25. Charles A. Hough, of Lebanon, spoke on "Tuberculosis Hospitals"; C. H. Langdale, of Cincinnati, on "Surgery in the Home"; T. A. Mitchell, Owingsville, and F. H. Lever, of Loveland, also spoke.

L. A. Brewer, associate professor of surgery in the Toledo Medical College, Medical Department, Toledo University, has been elected dean of the college to fill the place made vacant by the death of James Donnelly.

The annual meeting of the health officers of municipalities and township was held at Cincinnati for Southwestern Ohio October 20 and 21. C. A. L. Reed, of Cincinnati, spoke on "The National Board of Health Department." S. C.

Swartsel, of Cincinnati, on the "Control of Contagious and Infectious Diseases." Louis Schwab, mayor of Cincinnati, lent his council and assistance in every way possible. The milk question was ably discussed by John H. Landis, health officer of Cincinnati, and Frank H. Lamb, bacteriologist of Cincinnati.

Perry C. Pike, of the University of Pennsylvania, has accepted the chair of physiology in the Toledo Medical College, Medical Department, Toledo University, and is devoting his entire time to the work.

At the annual meeting of the Miami Medical College Alumni Association the following officers were elected: President, Dr. William C. Harris; Vice Presidents, Drs. Joseph E. Pirrung, William C. Herman, Frederick W. Lamb and Daniel J. Davies; Secretary-Treasurer, Dr. C. J. Broeman.

COUNTY TUBERCULOSIS SANATORIUM.—Plans are being prepared by the commissioners of Knox County for the construction of a building for the care and treatment of patients with tuberculosis. Under the new law, which goes into effect January 1, a separate building must be provided for tuberculosis patients at all county infirmaries.

The twelfth annual meeting of the Ohio Valley Medical Association was held in Evansville, Ind., November 9 and 10. The following officers were elected: President, Dr. William D. Haines, Cincinnati; Vice Presidents, Drs. Louis D. Brose, Evansville, Ind., Daniel N. Eisendrath, Chicago, and Henry R. Alburger, Bloomington, Ind., and Secretary-Treasurer, Dr. Benjamin L. W. Floyd, Evansville, Ind.

RED CROSS SEALS.—The Christmas seals of the National Association for the Study and Prevention of Tuberculosis will be on sale all over the United States in postoffices and elsewhere in a few days and throughout the holiday season. The actual seals are in red and green and are very attractive for fastening gifts and embellishing letters, etc. The proceeds of the sale go to the above-mentioned association for its work against the great white plague. All possible publicity is being given to the sale, and, in many cases, physicians are taking the lead in seeing that the seals are on sale in their several communities, and that the public is informed through the local newspapers.

DEATHS

David N. Kinsman, a graduate of the Ohio Medical College, Cincinnati, 1862, died at his home in Columbus, on Thursday, November 24, of angina pectoris, aged 76. Dr. Kinsman was one of the leading consultants in internal medicine and nervous diseases in central Ohio. He had held successively several teaching positions in the medical schools of Columbus, among them being Professor of Nervous and Mental Diseases in Starling Medical College, Professor of the Theory and Practice of Medicine in the Ohio Medical University, and the same chair in the Starling-Ohio Medical College. At the time of his death he was Emeritus Professor of Medicine. He also served as Chancellor of the Ohio Medical University. A special memorial meeting of the Columbus Academy of Medicine was held on November 27, and a committee appointed to draw up fitting resolutions.

J. D. Axline, Ohio Medical College, Cincinnati, 1868, died at his home in Shawnee on Saturday November 19 from pulmonary tuberculosis; aged sixty-nine.

James Gray Carr, years of practice, 1896; died at his home in Coshocton, October 21, from angina pectoris, aged 85.

Felix O. Neptune, years of practice, 1896; died at his home in Caldwell, October 21, from nephritis, aged 29.

William R. Rouse, Medical College of Ohio, 1875; died at his home in Painterville, October 18, from cerebral hemorrhage, aged 60.

James R. Bell, an eclectic practitioner of Ohio, died in the Soldiers' Home Hospital, Dayton, September 24, from senile debility, aged 85.

Alonzo Atwood, years of practice, 1896; died at his home in Middlefield, April 9, from senile debility, aged 78.

John Campbell Flynn, Pulte Medical College, 1847; died at his home in Warren, October 15, from chronic gastritis, aged 60.

William H. Rothert, Medical College of Ohio, 1889; died at his home in Cincinnati, November 4, from cerebral hemorrhage, aged 46.

ROSTER

OF THE

OHIO STATE MEDICAL ASSOCIATION

ADAMS COUNTY

Oscar E. McHenry.....Blue Creek
 Oscar B. Kirkpatrick.....Cherry Fork
 Frank Smith.....Cherry Fork
 Titus Sthphenson.....Cherry Fork
 Treber C. Crawford.....Dunkinsville
 A. K. Kirkpatrick.....Eckmansville
 John M. Lockhart.....Eckmansville
 John W. Guthrie.....Manchester
 Ralph W. E. Irwin.....Manchester
 James S. Berry.....Peebles
 Jesse N. Brooks.....Peebles
 Joseph E. Rogers.....Peebles
 G. F. Thomas.....Peebles
 James M. Wittenmeyer.....Peebles
 J. A. Glasgow.....Seamen
 James O. Wickerham.....Seamen
 C. W. Osborn.....Seamen
 Robert Y. Littleton.....Stouts
 James W. Bunn.....West Union
 E. M. Gaston.....West Union
 Wm. B. Loney.....West Union
 O. T. Sproull.....West Union
 Geo. D. McCormick.....Wamsley
 Christopher S. Corboy.....Winchester
 John W. Irwin.....Winchester
 T. H. Trout.....Winchester

ALLEN COUNTY

E. C. Yingling.....Beaverdam
 N. E. Brundage.....Delphos
 Edward Edwards.....Delphos
 M. M. Hixon.....Delphos
 J. R. Tillotson.....Delphos
 Geo. S. Weger.....Delphos
 Oral S. Robuck.....Gomer
 M. L. Johnston.....Harrod
 G. A. Bachmayer.....Lima
 Fred J. Bates.....Lima
 H. C. Bennett.....Lima
 A. W. Bice.....Lima
 M. S. Bowser.....Lima
 E. G. Burton.....Lima
 O. E. Chenoweth.....Lima
 A. H. Creps.....Lima
 S. J. Derbyshire.....Lima
 R. V. Dickey.....Lima
 S. B. Hiner.....Lima
 S. A. Hitchcock.....Lima
 W. E. Hover.....Lima
 J. H. Huntley.....Lima
 T. M. Johnson.....Lima
 R. D. Kahle.....Lima
 A. D. Knisely.....Lima
 L. F. Laudick.....Lima
 B. E. Leatherman.....Lima
 I. M. Likely.....Lima
 G. E. Martin.....Lima
 J. E. Mulligan.....Lima
 Shelby Mumaugh.....Lima
 J. J. Murphy.....Lima
 Albert Pfeiffer.....Lima
 J. B. Poling.....Lima
 W. H. Parent.....Lima
 Wm. Roush.....Lima
 A. S. Rudy.....Lima
 T. T. Sidener.....Lima
 D. W. Steiner.....Lima
 Chas. Steer.....Lima
 Oliver Steiner.....Lima
 I. F. Steiner.....Lima
 F. G. Steuber.....Lima
 T. R. Terwilliger.....Lima
 T. R. Thomas.....Lima
 P. I. Tussing.....Lima
 J. B. Vail.....Lima

W. B. VanNote.....Lima
 E. G. Weadock.....Lima
 Ira D. Baxter.....Spencerville
 Chas. D. Gamble.....Spencerville
 J. R. Welsh.....Spencerville
 J. H. Hauman.....West Cairo
 C. E. Stadler.....West Cairo
 G. J. Roberts.....Westminster

ASHLAND COUNTY

L. B. Ash.....Ashland
 R. C. Ash.....Ashland
 Frank Cowan.....Ashland
 F. V. Dotterwich.....Ashland
 William F. Emory.....Ashland
 Jacob Fridline.....Ashland
 J. S. H. Hutchinson.....Ashland
 J. H. King.....Ashland
 R. C. Kinnamon.....Ashland
 C. A. Levering.....Ashland
 W. M. McClellan.....Ashland
 Geo. Mehl.....Ashland
 D. L. Mohn.....Ashland
 O. J. Powell.....Ashland
 George P. Riebel.....Ashland
 W. H. Roasberry.....Ashland
 Elva E. Roberts.....Ashland
 A. L. Sherick.....Ashland
 E. V. Kendig.....Haysville
 J. S. Burnett.....Jeromeville
 G. B. Fuller.....Londouville
 J. A. Lingenfelter.....Loudonville
 Henry A. Schwartz.....Loudonville
 C. B. Scott.....Loudonville
 W. W. Wirt.....Loudonville
 C. J. Marquette.....Nova
 O. B. Richards.....Nova
 A. W. Budd.....Perrysville
 S. J. Covert.....Perrysville
 W. A. White.....Rows
 Watson Jacoby.....Savannah
 W. F. Persons.....Sullivan

ASHTABULA COUNTY

Mary Miller Battels.....Ashtabula
 S. H. Burroughs.....Ashtabula
 Clarence Case.....Ashtabula
 John Dickson.....Ashtabula
 H. W. Dorman.....Ashtabula
 J. J. Hogan.....Ashtabula
 Addison W. Hopkins.....Ashtabula
 Williams S. King.....Ashtabula
 S. M. Lynn.....Ashtabula
 J. K. Pollock.....Ashtabula
 C. C. Roller.....Ashtabula
 Fred D. Snyder.....Ashtabula
 Mabel Spaulding Watson.....Ashtabula
 Lee C. Stiles.....Austinburg
 Byron C. Eades.....Conneaut
 Wm. H. Leet.....Conneaut
 Bryant M. Tower.....Conneaut
 F. W. Upson.....Conneaut
 Otto N. Warner.....Conneaut
 V. H. Tuttle.....East Orwell
 F. E. Tibblitts.....Geneva
 F. E. Thompson.....Geneva
 C. C. Crosby.....Jefferson
 Orr A. Dickson.....Jefferson
 N. A. Burgess.....Rock Creek
 A. L. Pomeroy.....WindSOR

ATHENS COUNTY

Andrews F. Holmes.....Albany
 Edward I. Stanley.....Albany
 Geo. D. Swatt.....Albany
 E. E. Gillman.....Amesville
 John M. Howard.....Amesville

Geo. E. Flinn.....Amesville
 Wm. N. Alderman.....Athens
 David H. Biddle.....Athens
 Thomas A. Copeland.....Athens
 H. H. Dorr.....Athens
 J. P. Farson.....Athens
 Ada Ford.....Athens
 O. O. Fordyce.....Athens
 John L. Henry.....Athens
 Z. L. Henry.....Athens
 J. M. Higgins.....Athens
 Harrison T. Lee.....Athens
 F. R. Lord.....Athens
 Chas. McDougall.....Athens
 Frank P. McVey.....Athens
 Jas. T. Mervin.....Athens
 Henry T. Phillips.....Athens
 B. R. Leroy.....Athens
 J. R. Sprague.....Athens
 W. B. Tracy.....Athens
 S. L. McManigal.....Buchtel
 A. K. Walker.....Buchtel
 K. T. Crossen.....Carbondale
 W. V. Sprague.....Chauncey
 W. T. Sprague.....Chauncey
 James G. Blower.....Glouster
 A. J. Crawford.....Glouster
 Edward F. Danford.....Glouster
 F. W. Davis.....Glouster
 Ezra S. Koons.....Glouster
 W. A. E. La Fever.....Glouster
 Wm. R. Coleman.....Guyville
 Paul R. McLaughlin.....Guysville
 John W. Tippie.....Jacksonville
 Christian B. Von Scheele.....Jacksonville
 S. Elmer G. Pedigo.....Marshfield
 Samuel E. Butts.....Nelsonville
 C. C. Butts.....Nelsonville
 C. W. Cable.....Nelsonville
 Cassius G. Dew.....Nelsonville
 Nathan Hill.....Nelsonville
 Jerry M. Hyde.....Nelsonville
 E. J. Marsh.....Nelsonville
 Charles E. Welch.....Nelsonville
 A. L. Pritchard.....Nelsonville
 C. L. Orr.....Pratts Forks
 Genevieve Fry.....Shades
 P. Busch.....Stewart
 L. D. Nelson.....The Plains
 V. G. Danford.....Trimble

AUGLAIZE COUNTY

R. W. Sharp.....Buckland
 C. L. Dine.....Minster
 R. A. Rulman.....Minster
 J. H. Boesel.....New Bremen
 M. S. Eckermayer.....New Bremen
 F. F. Fledderjohan.....New Bremen
 H. E. Fledderjohan.....New Knoxville
 H. L. Meckstroth.....New Knoxville
 C. T. Ehrnsberger.....St. Johns
 E. R. Fast.....St. Marys
 J. E. Heap.....St. Marys
 M. J. Longworth.....St. Marys
 C. P. McKee.....St. Marys
 G. E. Noble.....St. Marys
 H. S. Noble.....St. Marys
 F. A. Shuffleton.....St. Marys
 B. E. Thomas.....St. Marys
 L. E. Williams.....St. Marys
 W. Turner.....Sante Fe
 J. E. Bayliff.....Unipollis
 J. W. Hurlbut.....Unipollis
 C. C. Berlin.....Wapakoneta
 C. L. Mueller.....Wapakoneta
 G. B. Nichols.....Wapakoneta

BELMONT COUNTY

J. C. Berry.....Alledonia
 H. G. Pugh.....Armstrongs Mills
 W. R. Allison.....Bannock
 J. S. Ely.....Barnesville
 W. L. Judkins.....Barnesville
 F. C. Peregoy.....Barnesville
 T. S. Rosengrant.....Barnesville
 D. O. Sheppard.....Barnesville
 E. C. Cope.....Barton
 W. J. Armstrong.....Bellaire
 Alfred Beetham.....Bellaire
 Dexter W. Boone.....Bellaire
 John A. Clark.....Bellaire
 James S. McClellan.....Bellaire
 H. G. Meek.....Bellaire
 Joseph Piersol.....Bellaire
 D. M. Murphy.....Bethesda
 J. F. Piper.....Bethesda

Wm. S. Warren.....Businessburg
 Andrew Heinlein.....Bridgeport
 James O. Howells.....Bridgeport
 J. A. McGlenn.....Bridgeport
 John A. Hobson.....Flushing
 V. N. Marsh.....Flushing
 J. H. Meek.....Glencoe
 J. W. Moffitt.....Glencoe
 Chas. C. Headley.....Holloway
 Fred A. Korrell.....Key
 J. N. Drennen.....Lloydsville
 E. V. Arbaugh.....Martins Ferry
 R. V. Blackford.....Martins Ferry
 Arlington W. Diven.....Martins Ferry
 John Johns.....Martins Ferry
 C. C. Messerly.....Martins Ferry
 B. O. Williams.....Martins Ferry
 R. H. Wilson.....Martins Ferry
 A. M. Forsythe.....Maynard
 D. T. Phillips.....Morristown
 H. G. Halderman.....Powhattan
 G. L. Ramsey.....Powhattan
 D. L. Walker.....St. Clairsville
 Samuel L. West.....St. Clairsville
 P. L. Ring.....Shadyside
 James B. McMillen.....Somerton

BROWN COUNTY

S. A. Laughlin.....Aberdeen
 E. Waldo Love.....Fayetteville
 S. B. Sheldon.....Five Mile
 Robert B. Fee.....Georgetown
 R. B. Hanna.....Georgetown
 A. W. Mitchell.....Georgetown
 J. H. Williamson.....Georgetown
 H. S. Guthrie.....Higginsport
 Wesley Love.....Higginsport
 C. B. Smedley.....Higginsport
 A. Sidwell.....Mt. Orab
 S. J. M. Stroup.....Mt. Orab
 Joseph G. Clemons.....New Hope
 Albert W. Francis.....Ripley
 Geo. P. Tyler.....Ripley
 H. M. Chaney.....Sardinia

BUTLER COUNTY

Frank M. Barden.....Hamilton
 Walter Brown.....Hamilton
 H. L. Burdsall.....Hamilton
 A. C. Carney.....Hamilton
 W. K. Cherryholmes.....Hamilton
 Edward Cook.....Hamilton
 G. M. Cummins.....Hamilton
 A. N. Ellis.....Hamilton
 Frank M. Flitton.....Hamilton
 C. L. Ferris.....Hamilton
 Merle Flenner.....Hamilton
 John Frances.....Hamilton
 L. H. Frechling.....Hamilton
 Jno. A. Grafft.....Hamilton
 W. D. Hancock.....Hamilton
 G. A. Herman.....Hamilton
 H. D. Hinckley.....Hamilton
 Clyde W. Hodges.....Hamilton
 F. G. Hornung.....Hamilton
 C. N. Huston.....Hamilton
 W. C. Huston.....Hamilton
 C. Keller.....Hamilton
 Henry Krone.....Hamilton
 M. P. Manning.....Hamilton
 Mark Millikin.....Hamilton
 Dan Milliken.....Hamilton
 E. H. Nelson.....Hamilton
 W. N. Rogers.....Hamilton
 J. H. Roll.....Hamilton
 P. M. Sater.....Hamilton
 C. A. Schaeffer.....Hamilton
 J. O. Scheel.....Hamilton
 Hugh Schell.....Hamilton
 Aug. Schumaker.....Hamilton
 E. C. Sill.....Hamilton
 James E. Torrence.....Hamilton
 J. F. Trump.....Hamilton
 Clarence Wasson.....Hamilton
 Georgetta Williams.....Hamilton
 D. B. Bundy.....Middletown
 O. M. Corson.....Middletown
 A. J. Dell.....Middletown
 T. A. Dickey.....Middletown
 L. H. Krauss.....Middletown
 W. A. Lucas.....Middletown
 G. D. Lummis.....Middletown
 Byron Sharkey.....Middletown
 Wm. Shipe.....Middletown
 Harry Silver.....Middletown
 James Macready.....Monroe

F. J. George.....	Okeana
W. S. Alexander.....	Oxford
R. Harvey Cook.....	Oxford
G. F. Cooke.....	Oxford
Hugh M. Moore.....	Oxford
H. H. Smith.....	Oxford
C. E. Shumard.....	Ross
R. E. Burdshall.....	Sevenmile
H. H. Marsh.....	Sevenmile
C. W. Stroup.....	Somerville
W. S. Reed.....	Stockton
James G. Grafft.....	Trenton
H. Schoenfeld.....	Trenton

CARROLL COUNTY

B. B. Buck.....	Harlem Springs
James J. Hathaway.....	Carrollton
John R. Williams.....	Carrollton
H. A. Harding.....	Kilgore
John A. Rhief.....	Malvern
Wm. R. Spratt.....	Malvern
J. D. Aldridge.....	Sherrodsville

CHAMPAIGN COUNTY

Lee R. Grimes.....	Magrew
C. M. McLaughlin.....	Magrew
A. A. Nincehelter.....	Mechanicsburg
A. M. Ziegler.....	Mingo Junction
C. D. Creviston.....	North Lewisburg
D. R. Emmons.....	North Lewisburg
W. A. Yinger.....	Rosewood
B. F. Baker.....	St. Paris
J. F. Hampsher.....	St. Paris
H. B. Hunt.....	St. Paris
Caleb Jones.....	St. Paris
L. M. Norman.....	St. Paris
C. A. Offenbacher.....	St. Paris
H. R. Zeller.....	St. Paris
Ward C. Zeller.....	St. Paris
C. C. Craig.....	Urbana
Harry Cook.....	Urbana
E. R. Earle.....	Urbana
Robert Henderson.....	Urbana
Richard T. Henderson.....	Urbana
D. C. Houser.....	Urbana
V. O. Longfellow.....	Urbana
S. C. Moore.....	Urbana
Samuel Musgrove.....	Urbana
David O'Brine.....	Urbana
J. D. O'Gara.....	Urbana
G. W. Pickering.....	Urbana
H. S. Preston.....	Urbana
Nelson Rhodes.....	Urbana
M. L. Smith.....	Urbana
V. G. Wolfe.....	Urbana

CLARK COUNTY

A. Deitrick.....	Donnellsville
H. L. Hiestand.....	Donnellsville
R. C. Hebble.....	Enon
G. C. Henkel.....	Enon
D. H. Jones.....	Medway
T. G. Farr.....	S. Charleston
J. J. Moore.....	S. Charleston
J. M. Austin.....	Springfield
Howard H. Austin.....	Springfield
F. P. Anzinger.....	Springfield
H. Baldwin.....	Springfield
R. L. Bell.....	Springfield
T. F. Bliss.....	Springfield
P. W. Brown.....	Springfield
P. E. Cromer.....	Springfield
Emory F. Davis.....	Springfield
J. O. Davy.....	Springfield
J. C. Easton.....	Springfield
C. W. Evans.....	Springfield
G. D. Grant.....	Springfield
D. K. Gotwald.....	Springfield
H. A. M. Hadley.....	Springfield
F. A. Hartley.....	Springfield
C. M. Hiestand.....	Springfield
D. W. Hogue.....	Springfield
R. B. House.....	Springfield
Robert H. House.....	Springfield
Stanley Hutchings.....	Springfield
Isaac Kay.....	Springfield
C. H. Kay.....	Springfield
J. H. Link.....	Springfield
O. M. Marquart.....	Springfield
H. B. Martin.....	Springfield
A. McCregor.....	Springfield
A. H. McIntire.....	Springfield
Thad McLaughlin.....	Springfield
Harry T. Miller.....	Springfield
C. L. Minor.....	Springfield

J. E. Myers.....	Springfield
L. E. Niles.....	Springfield
W. A. Ort.....	Springfield
Arthur Pancake.....	Springfield
M. V. Patton.....	Springfield
W. B. Patton.....	Springfield
C. J. Prince.....	Springfield
C. S. Ramsey.....	Springfield
Thomas M. Reade.....	Springfield
R. C. Rind.....	Springfield
J. H. Rogers.....	Springfield
Clayton W. Russell.....	Springfield
I. E. Seward.....	Springfield
W. A. Smith.....	Springfield
A. B. Smith.....	Springfield
E. Studebaker.....	Springfield
L. L. Syman.....	Springfield
W. C. Taylor.....	Springfield
Bennetta D. Titlow.....	Springfield
C. Ultes.....	Springfield
Wm. Ultes.....	Springfield
E. A. Dye.....	Vienna Cross Roads

CLERMONT COUNTY

E. M. Brown.....	Amelia
H. E. Cover.....	Bantam
James K. Ashburn.....	Batavia
Chas. Belt.....	Batavia
O. C. Davison.....	Bethel
J. H. Andrews.....	Goshen
F. E. Snider.....	Goshen
Phillip Kennedy.....	Laurel
F. H. Leevers.....	Loveland
J. D. Wakefield.....	Loveland
J. L. Fomorlin.....	Marathon
E. C. Ireton.....	Marathon
R. E. Belt.....	Milford
F. C. Curry.....	Milford
C. J. Spence.....	Milford
A. J. Hughes.....	Moscow
R. F. Erdman.....	New Richmond
D. M. Roberts.....	New Richmond
F. A. Ireton.....	Newtonville
E. K. Wolf.....	Newtonville
T. A. Mitchell.....	Owensville
G. G. Rutledge.....	Owensville
O. B. Martin.....	Williamsburg
C. A. Bennett.....	Withamsville
F. P. Witham.....	Withamsville

CLINTON COUNTY

Robert Conard.....	Blanchester
Lyman Watkins.....	Blanchester
S. Lambright.....	Lees Creek
W. T. Scott.....	Martinsville
H. Whistler.....	New Antioch
Geo. Conard.....	New Vienna
P. D. Espey.....	Port Williams
T. E. Craig.....	Sabina
J. F. Fisher.....	Sabina
H. Stuntz.....	Sabina
C. A. Tribbett.....	Westboro
G. M. Austin.....	Wilmington
E. C. Briggs.....	Wilmington
Kelley Hale.....	Wilmington
C. E. Kinzell.....	Wilmington
G. M. Murrell.....	Wilmington
F. A. Peele.....	Wilmington
A. T. Quinn.....	Wilmington
Elisabelle Shrieves.....	Wilmington
G. W. Wire.....	Wilmington
F. D. Wright.....	Wilmington

COLUMBIANA COUNTY

Harry Bookwalter.....	Columbiana
Alfred Cobb.....	Damascus
W. N. Bailey.....	East Liverpool
Wm. M. Calhoun.....	East Liverpool
J. Howard Davis.....	East Liverpool
Wm. N. Gilmore.....	East Liverpool
Rose L. Hathaway.....	East Liverpool
O. M. Hendershott.....	East Liverpool
W. A. Hobbs.....	East Liverpool
L. A. Lemmon.....	East Liverpool
O. D. Shay.....	East Liverpool
Rose C. Turnbull.....	East Liverpool
P. C. Hartford.....	East Palestine
Guy O. Rowland.....	East Palestine
Oscar Hulin.....	Greenford
S. A. Conrad.....	Leetonia
E. Hahn.....	Leetonia
S. R. McCready.....	Leetonia
E. H. McKinney.....	Leetonia
Frank Graham.....	Lisbon

T. B. Marquis.....	Lisbon	H. A. Becker.....	Cleveland
W. E. Morris.....	Lisbon	Fred Beekel.....	Cleveland
M. J. Pelley.....	Millport	I. M. Belkowsky.....	Cleveland
S. J. Patterson.....	New Waterford	J. H. Belt.....	Cleveland
D. M. Bloom.....	New Waterford	G. U. Bennett.....	Cleveland
E. C. Louthan.....	Rogers	W. J. Benner.....	Cleveland
Paul E. Barckhoff.....	Salem	S. S. Berger.....	Cleveland
Win. J. Blackburn.....	Salem	S. L. Bernstein.....	Cleveland
A. Cruikshank.....	Salem	H. F. Biggar, Jr.....	Cleveland
Stanton Heck.....	Salem	Arthur H. Bill.....	Cleveland
T. J. Lyle.....	Salem	R. H. Birge.....	Cleveland
F. T. Miles.....	Salem	R. H. Bishop.....	Cleveland
Jesse Sturgeon.....	Salem	I. J. Biskind.....	Cleveland
S. N. Sallume.....	Salem	J. F. Black.....	Cleveland
H. Yaggi.....	Salem	M. E. Bland.....	Cleveland
J. W. Hammond.....	Wellsville	H. C. Bliss.....	Cleveland
Arthur Holland.....	Wellsville	Max Boesger.....	Cleveland
J. M. McGeorge.....	Wellsville	R. A. Bolt.....	Cleveland
O. A. Rhodes.....	Winona	M. B. Bonta.....	Cleveland
J. B. Talmage.....	Clyde	M. Borts.....	Cleveland

COSHOCTON COUNTY

C. A. Portz.....	Baltic
E. C. Carr.....	Coshocton
J. D. Lower.....	Coshocton
F. M. Marshall.....	Coshocton
Jesse McClain.....	Coshocton
H. R. McCurdy.....	Coshocton
L. C. McCurdy.....	Coshocton
Lister Pomerene.....	Coshocton
J. W. Shaw.....	Coshocton
E. C. Voltz.....	Chili
E. U. Marquand.....	Conesville
C. R. Kitzmiller.....	Fresno
J. W. Dillon.....	New Castle
D. M. Criswell.....	Plainfield
F. H. Yarnell.....	West Lafayette

CRAWFORD COUNTY

John W. Birk.....	Bucyrus
L. Kemp.....	Bucyrus
Claud I. Lingafelter.....	Bucyrus
James J. Martin.....	Bucyrus
Howard H. Smith.....	Bucyrus
Chas. A. Ulmer.....	Bucyrus
W. L. Yeomans.....	Bucyrus
R. R. Harris.....	Crestline
Carl A. Marquart.....	Crestline
Jacob B. Moses.....	Crestline
Chas. E. Trimble.....	Crestline
C. D. Helfrich.....	Gallion
C. D. Morgan.....	Gallion
Katherine J. Rayl.....	Gallion
Albert A. Starnes.....	Gallion
A. E. Loyer.....	New Washington
W. W. Lucas.....	New Washington
Frank M. Virtue.....	Sulphur Springs
Wm. H. Guiss.....	Tiro

CUYAHOGA COUNTY

R. R. Seidel.....	Bedford
C. W. Smith.....	Bedford
L. G. Knowlton.....	Berea
A. H. Perry.....	Berea
C. G. Warden.....	Berea
E. L. Bourn.....	Brecksville
R. A. Berneike.....	Collinwood
W. H. Gunsolly.....	Collinwood
Geo. S. Stillman.....	Deerfield
W. S. Crowell.....	Lakewood
Wm. O. Jenks.....	Nottingham
S. E. Carlin.....	South Brooklyn
Wm. J. Abbott.....	Cleveland
Thomas Adams.....	Cleveland
M. A. Albe.....	Cleveland
Charles J. Albe.....	Cleveland
D. D. Alsbacher.....	Cleveland
D. P. Allen.....	Cleveland
Fred Y. Allen.....	Cleveland
John Anderson.....	Cleveland
G. D. Arnold.....	Cleveland
J. B. Austin.....	Cleveland
V. M. Bachman.....	Cleveland
Robert Bailey.....	Cleveland
L. K. Baker.....	Cleveland
A. R. Baker.....	Cleveland
Homer C. Ballard.....	Cleveland
N. S. Banker.....	Cleveland
I. W. Bard.....	Cleveland
Wm. T. Barger.....	Cleveland
S. S. Barker.....	Cleveland
G. A. Barricelli.....	Cleveland
Geo. I. Bauman.....	Cleveland
S. Baume.....	Cleveland
H. A. Becker.....	Cleveland
Fred Beekel.....	Cleveland
I. M. Belkowsky.....	Cleveland
J. H. Belt.....	Cleveland
G. U. Bennett.....	Cleveland
W. J. Benner.....	Cleveland
S. S. Berger.....	Cleveland
S. L. Bernstein.....	Cleveland
H. F. Biggar, Jr.....	Cleveland
Arthur H. Bill.....	Cleveland
R. H. Birge.....	Cleveland
R. H. Bishop.....	Cleveland
I. J. Biskind.....	Cleveland
J. F. Black.....	Cleveland
M. E. Bland.....	Cleveland
H. C. Bliss.....	Cleveland
Max Boesger.....	Cleveland
R. A. Bolt.....	Cleveland
M. B. Bonta.....	Cleveland
M. Borts.....	Cleveland
W. R. Boyd.....	Cleveland
H. C. Brainard.....	Cleveland
T. B. Breck.....	Cleveland
H. H. Brelsford.....	Cleveland
John H. Brett.....	Cleveland
I. S. Bretz.....	Cleveland
C. E. Briggs.....	Cleveland
C. J. Brobeck.....	Cleveland
Leslie Brookhart.....	Cleveland
A. J. Brockett.....	Cleveland
Myer Brody.....	Cleveland
Wm. E. Brokaw.....	Cleveland
E. D. Brown.....	Cleveland
A. H. Bruening.....	Cleveland
Wm. E. Bruner.....	Cleveland
J. L. Bubis.....	Cleveland
Maurice Budwig.....	Cleveland
J. J. Buel.....	Cleveland
G. P. Buffett.....	Cleveland
F. E. Bunts.....	Cleveland
H. J. Burdick.....	Cleveland
T. A. Burke.....	Cleveland
P. J. Byrne.....	Cleveland
D. J. Calkins.....	Cleveland
A. D. Campbell.....	Cleveland
O. B. Campbell.....	Cleveland
M. J. Carey.....	Cleveland
I. C. Carille.....	Cleveland
S. E. Carlton.....	Cleveland
M. W. Carpenter.....	Cleveland
P. W. Carr.....	Cleveland
E. P. Carter.....	Cleveland
G. Caruso.....	Cleveland
Frank M. Casto.....	Cleveland
Nicola Cerri.....	Cleveland
W. P. Chamberlain.....	Cleveland
W. B. Chamberlain.....	Cleveland
A. M. Cheetham.....	Cleveland
L. W. Childs.....	Cleveland
H. T. Christholm.....	Cleveland
H. T. Clapp.....	Cleveland
F. S. Clark.....	Cleveland
Chas. H. Clark.....	Cleveland
Wm. Clark.....	Cleveland
A. S. Civins.....	Cleveland
P. W. Cobb.....	Cleveland
J. E. F. Cogan.....	Cleveland
Arnold Cohen.....	Cleveland
A. E. Connell.....	Cleveland
J. E. Cook.....	Cleveland
A. J. Cook.....	Cleveland
M. Coplin.....	Cleveland
W. T. Corlett.....	Cleveland
F. P. Corrigan.....	Cleveland
T. A. Costello.....	Cleveland
W. W. Cowgill.....	Cleveland
E. H. Cox.....	Cleveland
C. C. Crawford.....	Cleveland
G. W. Crile.....	Cleveland
E. P. Crowe.....	Cleveland
H. C. Crumrine.....	Cleveland
C. L. Cummer.....	Cleveland
E. F. Cushing.....	Cleveland
John C. Darby.....	Cleveland
J. F. Davidson.....	Cleveland
F. W. Davis.....	Cleveland
H. L. Davis.....	Cleveland
R. Dexter.....	Cleveland
J. Dickenson.....	Cleveland
C. L. Difford.....	Cleveland
Howard Ditttrick.....	Cleveland
W. F. Doolittle.....	Cleveland
Robert C. Droege.....	Cleveland
H. H. Drysdale.....	Cleveland
J. J. Dunn.....	Cleveland

C. F. Dutton.....	Cleveland	A. A. Jenkins.....	Cleveland
J. H. Dye.....	Cleveland	H. Jenkins.....	Cleveland
G. A. Ehret.....	Cleveland	R. A. Jewitt.....	Cleveland
A. B. Eisenberg.....	Cleveland	J. D. Jones.....	Cleveland
R. W. Elliott.....	Cleveland	Arthur J. Jones.....	Cleveland
Simon Englander.....	Cleveland	N. M. Jones.....	Cleveland
R. C. Engel.....	Cleveland	S. E. Kaestlen.....	Cleveland
Wm. J. Esch.....	Cleveland	M. Max Kahn.....	Cleveland
S. W. Evans.....	Cleveland	H. C. Kelker.....	Cleveland
G. B. Farnsworth.....	Cleveland	S. W. Kelley.....	Cleveland
H. O. Feiss.....	Cleveland	H. R. Kellum.....	Cleveland
H. M. Fenton.....	Cleveland	I. J. Kerr.....	Cleveland
Carlos S. Fenton.....	Cleveland	E. W. Keyes.....	Cleveland
R. E. Fisher.....	Cleveland	W. H. Kinnicutt.....	Cleveland
M. Francis.....	Cleveland	Geo. M. Kinsey.....	Cleveland
F. C. Franke.....	Cleveland	M. H. Klaus.....	Cleveland
J. M. Fraser.....	Cleveland	E. Klaus.....	Cleveland
M. Friedrich.....	Cleveland	W. A. Knowlton.....	Cleveland
J. M. Friend.....	Cleveland	J. V. Kofron.....	Cleveland
J. C. Fritch.....	Cleveland	E. Konard.....	Cleveland
R. D. Fry.....	Cleveland	Francis Konrad.....	Cleveland
Geo. Edw. Follansbee.....	Cleveland	F. T. Kopfstein.....	Cleveland
Clyde E. Ford.....	Cleveland	J. J. Kotershall.....	Cleveland
A. F. Furrer.....	Cleveland	B. Krause.....	Cleveland
J. K. Gamble.....	Cleveland	P. H. Krebs.....	Cleveland
Wm. E. Gernhard.....	Cleveland	C. R. Krouse.....	Cleveland
J. Goldfinger.....	Cleveland	Harry B. Kurtz.....	Cleveland
I. J. Goodman.....	Cleveland	F. J. Kuta.....	Cleveland
E. M. Goodwin.....	Cleveland	L. W. Ladd.....	Cleveland
Mary C. Goodwin.....	Cleveland	Walter B. Laffer.....	Cleveland
J. V. Gallagher.....	Cleveland	W. A. Landgrebe.....	Cleveland
J. L. Gartland.....	Cleveland	A. H. Lanzer.....	Cleveland
F. J. Geib.....	Cleveland	S. H. Large.....	Cleveland
Chas Gentsch.....	Cleveland	Jay Latimer.....	Cleveland
A. H. Gill.....	Cleveland	Edward Lauder.....	Cleveland
H. J. Gerstenberger.....	Cleveland	R. J. Lawlor.....	Cleveland
Wm. C. Gill.....	Cleveland	H. J. Lee.....	Cleveland
R. Gittlesohn.....	Cleveland	Walter I. Lefevre.....	Cleveland
O. E. George.....	Cleveland	Carl A. Lenhart.....	Cleveland
C. Lee Graber.....	Cleveland	J. N. Lenker.....	Cleveland
W. M. Gregory.....	Cleveland	W. L. Lemon.....	Cleveland
T. Griffiths.....	Cleveland	B. Levenberg.....	Cleveland
G. L. Haeffe.....	Cleveland	G. S. Lewin.....	Cleveland
C. O. Hain.....	Cleveland	G. H. Lewis.....	Cleveland
W. A. Haldy.....	Cleveland	J. M. Lewis.....	Cleveland
C. A. Hamann.....	Cleveland	M. J. Lichty.....	Cleveland
B. F. Hambleton.....	Cleveland	Wm. R. Lincoln.....	Cleveland
A. P. Hammond.....	Cleveland	W. E. Linden.....	Cleveland
H. E. Handerson.....	Cleveland	Thomas Linley.....	Cleveland
B. B. Handmacher.....	Cleveland	F. W. Linn.....	Cleveland
B. G. Hannum.....	Cleveland	M. Lowenthal.....	Cleveland
E. A. Hannum.....	Cleveland	W. E. Lower.....	Cleveland
E. S. Hannum.....	Cleveland	J. H. Lowmann.....	Cleveland
D. S. Hanson.....	Cleveland	V. C. Lucas.....	Cleveland
H. J. Hartzell.....	Cleveland	E. L. Lowthian.....	Cleveland
C. I. Harpster.....	Cleveland	W. Harris Lucas.....	Cleveland
H. D. Haskins.....	Cleveland	W. P. Lucas.....	Cleveland
C. H. Hay.....	Cleveland	H. C. Luck.....	Cleveland
Herbert Hayford.....	Cleveland	A. I. Ludlow.....	Cleveland
J. A. Heath.....	Cleveland	A. W. Lueke.....	Cleveland
G. K. Heidler.....	Cleveland	H. C. Mabley.....	Cleveland
D. V. Heimlich.....	Cleveland	G. D. McLeod.....	Cleveland
Helen Hempstead.....	Cleveland	M. M. Mandel.....	Cleveland
A. S. Henry.....	Cleveland	R. M. Manley.....	Cleveland
Henry A. Herkner.....	Cleveland	W. J. Manning.....	Cleveland
F. C. Herrick.....	Cleveland	D. Marvine.....	Cleveland
H. B. Herrick.....	Cleveland	Alfred S. Maschke.....	Cleveland
H. J. Herrick.....	Cleveland	J. E. Maska.....	Cleveland
W. H. Herrick.....	Cleveland	C. L. McDonald.....	Cleveland
F. W. Hickin.....	Cleveland	C. H. McFarland.....	Cleveland
Walter C. Hill.....	Cleveland	N. P. McGay.....	Cleveland
E. W. Hill.....	Cleveland	J. B. McGee.....	Cleveland
F. W. Hitchings.....	Cleveland	J. H. McHenry.....	Cleveland
John F. Hobson.....	Cleveland	J. J. R. McLeod.....	Cleveland
Jos. F. Hobson.....	Cleveland	H. McMeeley.....	Cleveland
W. S. Hobson.....	Cleveland	J. C. McMichael.....	Cleveland
Chas. M. Hole.....	Cleveland	E. E. McPeck.....	Cleveland
W. W. Holliday.....	Cleveland	F. X. McNamara.....	Cleveland
B. W. Holliday.....	Cleveland	W. A. Medlin.....	Cleveland
Geo. Holmes.....	Cleveland	W. H. Merriam.....	Cleveland
C. F. Hoover.....	Cleveland	W. E. Merrick.....	Cleveland
W. A. Hosick.....	Cleveland	Amanda H. Miller.....	Cleveland
E. O. Houck.....	Cleveland	B. L. Milliken.....	Cleveland
A. F. House.....	Cleveland	Irving C. Miner.....	Cleveland
A. R. Howard.....	Cleveland	Thos. J. Mizer.....	Cleveland
W. T. Howard, Jr.....	Cleveland	E. P. Monaghan.....	Cleveland
W. H. Humiston.....	Cleveland	S. H. Monson.....	Cleveland
Fannie C. Hutchins.....	Cleveland	E. A. Montenyohl.....	Cleveland
A. G. Hyde.....	Cleveland	J. M. Moore.....	Cleveland
Wm. H. Hyde.....	Cleveland	G. N. Morrill.....	Cleveland
N. W. Ingalls.....	Cleveland	F. J. Morton.....	Cleveland
J. M. Ingersoll.....	Cleveland	Otto Mueller.....	Cleveland
W. J. Irwin.....	Cleveland	James Munsie.....	Cleveland
P. A. Jacobs.....	Cleveland	J. A. Nachtigall.....	Cleveland
W. S. James.....	Cleveland	A. C. Nash.....	Cleveland

Chas. F. Nelson.....	Cleveland	Minabel Snow	Cleveland
John Neuberger.....	Cleveland	T. Sollman	Cleveland
Robert B. Newcomb.....	Cleveland	G. P. Soyer.....	Cleveland
F. B. Norton.....	Cleveland	John G. Spenser.....	Cleveland
J. J. Nungesser.....	Cleveland	E. Spenser.....	Cleveland
W. Nuss.....	Cleveland	D. M. Spicer.....	Cleveland
J. C. Nuss.....	Cleveland	A. F. Spurney.....	Cleveland
F. A. Oakley.....	Cleveland	A. B. Spurney.....	Cleveland
K. E. Ochs.....	Cleveland	J. A. Staral.....	Cleveland
G. M. O'Neil.....	Cleveland	Morris D. Stern.....	Cleveland
H. B. Ormsby.....	Cleveland	Walter G. Stepp.....	Cleveland
W. O. Osborn.....	Cleveland	D. B. Steuer.....	Cleveland
R. J. Ochsnor.....	Cleveland	J. C. Steuer.....	Cleveland
J. D. Osmond.....	Cleveland	G. W. Stevenson.....	Cleveland
L. W. Oster.....	Cleveland	Geo. N. Stewart.....	Cleveland
B. F. Oswald.....	Cleveland	J. R. Stewart.....	Cleveland
Milton J. Parke.....	Cleveland	C. A. Stoeltzing.....	Cleveland
Willis I. Parsons.....	Cleveland	C. W. Stone.....	Cleveland
C. B. Parker.....	Cleveland	E. H. Stone.....	Cleveland
N. O. Paulin.....	Cleveland	W. C. Stoner.....	Cleveland
A. F. Pav.....	Cleveland	Alven S. Story.....	Cleveland
R. G. Perkins.....	Cleveland	J. Stotter.....	Cleveland
A. Peskind.....	Cleveland	C. C. Stuart.....	Cleveland
Ben Peskind.....	Cleveland	F. H. Suchy.....	Cleveland
S. Peskind.....	Cleveland	R. H. Sunkle.....	Cleveland
Edward Peterka.....	Cleveland	J. Sykora.....	Cleveland
Lulu A. Peterson.....	Cleveland	Benjamin Szentpahy.....	Cleveland
John Phillips.....	Cleveland	Robert E. Taft.....	Cleveland
J. D. Pilcher.....	Cleveland	G. R. Tanno.....	Cleveland
Carlos E. Pitkin.....	Cleveland	Harry M. Tarr.....	Cleveland
Joseph Placak.....	Cleveland	R. T. Tarr.....	Cleveland
J. B. Plent.....	Cleveland	F. C. Taylor.....	Cleveland
R. Pollock.....	Cleveland	A. C. Taylor.....	Cleveland
C. Pope.....	Cleveland	T. J. Taylor.....	Cleveland
H. H. Powell.....	Cleveland	J. J. Thomas.....	Cleveland
A. E. Powell.....	Cleveland	G. F. Thomas.....	Cleveland
D. Prendergast.....	Cleveland	O. T. Thomas.....	Cleveland
I. J. Propper.....	Cleveland	J. S. Tierney.....	Cleveland
A. J. Prudhomme.....	Cleveland	W. A. Tims.....	Cleveland
J. H. Quayle.....	Cleveland	F. H. Todd.....	Cleveland
W. B. Rasing.....	Cleveland	Lillian G. Towslee.....	Cleveland
W. L. Rayl.....	Cleveland	Ira W. Tripp.....	Cleveland
A. W. Reed.....	Cleveland	J. E. Tuckerman.....	Cleveland
Leo Reich.....	Cleveland	W. H. Tuckerman.....	Cleveland
D. Reigelhaupt.....	Cleveland	A. M. Tweedie.....	Cleveland
E. B. Rhodes.....	Cleveland	R. K. Updegraff.....	Cleveland
W. H. Rieger.....	Cleveland	Henry Upson.....	Cleveland
H. V. Riewel.....	Cleveland	G. D. Upson.....	Cleveland
J. A. Riley.....	Cleveland	F. W. Vincent.....	Cleveland
Hunter Robb.....	Cleveland	L. H. Wagner.....	Cleveland
H. W. Rogers.....	Cleveland	H. G. Wagner.....	Cleveland
E. F. Romig.....	Cleveland	O. P. Walker.....	Cleveland
E. Rosenberg.....	Cleveland	C. E. Ward.....	Cleveland
M. Rosenwasser.....	Cleveland	W. C. Warner.....	Cleveland
A. Rosewater.....	Cleveland	A. R. Warner.....	Cleveland
Frank Roth.....	Cleveland	S. Wasserman.....	Cleveland
I. M. Rubin.....	Cleveland	G. W. Watson.....	Cleveland
Robert E. Ruedy.....	Cleveland	W. C. Weber.....	Cleveland
Geo. Russell.....	Cleveland	Oliver A. Weber.....	Cleveland
E. G. Rust.....	Cleveland	H. H. Webster.....	Cleveland
B. E. Sager.....	Cleveland	S. J. Webster.....	Cleveland
W. E. Sampliner.....	Cleveland	C. R. Wedler.....	Cleveland
Henry L. Sanford.....	Cleveland	W. H. Weir.....	Cleveland
J. P. Sawyer.....	Cleveland	Geo. J. Weitz.....	Cleveland
W. A. Schlesinger.....	Cleveland	J. H. Wells.....	Cleveland
C. Schmitz.....	Cleveland	K. S. West.....	Cleveland
F. J. Schnoldt.....	Cleveland	Herbert T. Weston.....	Cleveland
R. G. Schnee.....	Cleveland	L. A. Wheelock.....	Cleveland
M. Schett.....	Cleveland	C. C. White.....	Cleveland
A. P. Schuelze.....	Cleveland	W. H. Whitslar.....	Cleveland
O. T. chultz.....	Cleveland	J. W. Wickersham.....	Cleveland
A. C. Scott.....	Cleveland	T. B. Williams.....	Cleveland
N. Store Scott.....	Cleveland	C. D. Williams.....	Cleveland
A. P. Scully.....	Cleveland	C. W. Wille.....	Cleveland
E. H. Season.....	Cleveland	C. O. Witter.....	Cleveland
Jas. Seliskar.....	Cleveland	Leo Wolfstein.....	Cleveland
S. L. Selleck.....	Cleveland	J. S. Wood.....	Collinwood
W. E. Shackleton.....	Cleveland	F. J. Wood.....	Cleveland
W. D. Sharp.....	Cleveland	W. W. Woolgar.....	Cleveland
J. F. Sheffield.....	Cleveland	Norman Yarian.....	Cleveland
H. G. Sherman.....	Cleveland	H. E. Yoder.....	Cleveland
O. M. Shirey.....	Cleveland	I. I. Yoder.....	Cleveland
U. S. Shirley.....	Cleveland	T. C. Young.....	Cleveland
L. E. Siegelstein.....	Cleveland	S. A. Young.....	Cleveland
C. Sihler.....	Cleveland	E. K. Zaworski.....	Cleveland
Jacob Silberman.....	Cleveland	W. O. Ziehmer.....	Cleveland
R. H. Will.....	Cleveland		
F. D. Simons.....	Cleveland		
A. J. Simpson.....	Cleveland		
R. E. Skeel.....	Cleveland		
A. J. Skeel.....	Cleveland		
H. G. Sloan.....	Cleveland		
P. S. Smigel.....	Cleveland		
Geo. S. Smith.....	Cleveland		
D. B. Smith.....	Cleveland		

DARKE COUNTY

G. R. Wycoff.....	McKee's Rocks
Jacob C. Polling.....	Ansonia
Chas. I. Stephens.....	Ansonia
Peter W. Byers.....	Arcanum
I. H. Hawes.....	Arcanum
A. M. Brandon.....	Beamsville
John Ballinger.....	Bradford

Lewis Bigler	Gettysburg
John E. Monger	Gettysburg
H. Z. Silver	Gorden
J. M. Anderson	Greenville
Geo. W. Burnett	Greenville
Phillip Dicks	Greenville
Wm. T. Fitzgerald	Greenville
Wm. E. Guntrum	Greenville
Sylvester A. Hawes	Greenville
John E. Hunter	Greenville
E. G. Husted	Greenville
Wm. Lynch	Greenville
Brice F. Metcalfe	Greenville
D. Robinson	Greenville
Andrew W. Rush	Greenville
Herschel Snore	Greenville
O. P. Wolverton	Greenville
C. F. Puterbaugh	Ft. Jefferson
John E. Detamore	Hillgrove
Allen W. Meek	Hollansburg
W. B. Rhoads	Hollansburg
H. C. Reigle	Lightsville
E. A. Hecker	New Madison
J. D. Hartzell	North Star
Chas. Baker	Palestine
J. O. Starr	Pittsburg
J. M. De Ford	Rosburg
Mathias M. Corwin	Savona
Wm. C. Guteruth	Versailles
W. H. Rike	Versailles
Chas. F. Ryan	Versailles
Jas. L. Husted	Woodington
E. A. Fisher	Yorkshire

DEFIANCE COUNTY

N. A. Belan	Defiance
N. Scott Blue	R. F. D. Defiance
Risdon W. Finch	Defiance
Wm. S. Powell	Defiance
John J. Reynolds	Defiance
Chas. E. Slocum	Defiance
M. B. Stevens	Defiance
John B. Ury	Defiance
John D. Westrick	Defiance
Geo. E. Winn	Defiance
C. W. Zeller	Defiance
M. C. Coy	Evansport
E. W. Grubb	Farmer
W. J. Walker	Farmer
N. T. Dean	Hicksville
N. H. Jackson	Hicksville
R. B. Cameron	Jewell
Park Lehman	Ney
J. K. Denman	Sherwood
H. C. Lindersmith	Sherwood

DELAWARE COUNTY

Ella Welch	Ashley
A. H. Buck	Delaware
O. W. Bonner	Delaware
C. W. Chadister	Delaware
Wm. F. Crickard	Delaware
H. M. Day	Delaware
S. W. Fowler	Delaware
F. L. Gage	Delaware
E. M. Hall	Delaware
D. E. Hughs	Delaware
J. K. James	Delaware
J. H. Miller	Delaware
G. W. Moorehouse	Delaware
F. M. Murray	Delaware
A. J. Pounds	Delaware
Ivadell Rodgers	Delaware
E. M. Semans	Delaware
W. M. Semans	Delaware
A. J. Willey	Delaware
J. B. Woodworth	Delaware
W. H. Woodworth	Delaware
G. E. Cowles	Ostrander
G. E. Robinson	Ostrander
V. B. Weller	Ostrander
C. F. Tally	Powell
T. K. Jones	Radnor
Geo. F. Foster	Sunbury
G. H. Gerhart	Sunbury

ERIE COUNTY

Carl L. Tuttle	Berlin Heights
John W. Boss	Birmingham
Smith Gorsuch	Castalia
Wm. Storey	Castalia
J. P. Esch	Huron
F. M. Haughteling	Huron

Wm. H. Pollock	Huron
J. Gordon Griffin	Kelley's Island
Ralph E. Garnhardt	Milan
H. B. Beatty	Sandusky
Emily Blakeslee	Sandusky
Chester B. Bliss	Sandusky
Carrie Chase Davis	Sandusky
Wm. Graefe	Sandusky
Charles Graefe	Sandusky
John T. Haynes	Sandusky
W. D. Hoyer	Sandusky
C. R. Knoble	Sandusky
F. F. Lehman	Sandusky
M. J. Love	R. F. D. No. 3 Sandusky
C. H. Merz	Sandusky
Chas. W. Metz	Soldiers' Home
Hiram D. Petterson	Sandusky
Fred Schoepfle	Sandusky
Henry C. Schoepfle	Sandusky
Parker F. Southwick	Sandusky

FAIRFIELD COUNTY

John Stamm	Basil
A. A. Bardford	Bremen
A. A. Brown	Carroll
H. A. Brown	Carroll
J. T. Hufford	Clearport
C. M. Alfred	Lancaster
C. F. Axline	Lancaster
J. H. Axline	Lancaster
Geo. O. Beery	Lancaster
J. T. Farley	Lancaster
C. W. Goss	Lancaster
A. L. Guthrie	Lancaster
H. M. Hazelton	Lancaster
James M. Lantz	Lancaster
S. A. D. Miller	Lancaster
R. W. Mondhank	Lancaster
Geo. W. O'Grady	Lancaster
H. R. Plum	Lancaster
W. M. Samson	Lancaster
H. M. Samson	Lancaster
J. J. Silbaugh	Lancaster
Ralph H. Smith	Lancaster
Julius G. Stammell	Lancaster
J. M. Stuckey	Lancaster
F. P. Stuckey	Lancaster
J. Francis Trout	Lancaster
George S. Courtright	Lithopolis
E. B. Roller	Lithopolis
A. V. Lerch	Pleasantville
P. S. Bone	Royalton
C. H. Wyker	Rushville
Geo. P. Huddle	Stoutsville
C. R. Fishel	Thurston

FAYETTE COUNTY

A. S. Stemler	Good Hope
Geo. Mytinger	Jeffersonville
John R. Adams	Milledgeville
Grant Marchant	Milledgeville
A. O. Erwin	New Holland
J. B. May	New Holland
A. E. Kaler	New Holland
G. W. Blakeley	Washington C. H.
L. L. Brock	Washington C. H.
H. P. Harper	R. F. D. Washington C. H.
L. P. Howell	Washington C. H.
R. M. Hughey	Washington C. H.
J. W. Hughey	Washington C. H.
A. A. Hyer	Washington C. H.
S. A. Ireland	Washington C. H.
W. E. Ireland	Washington C. H.
H. M. Jenkins	Washington C. H.
Lucy W. Pine	Washington C. H.
D. H. Rowe	Washington C. H.
E. F. Todhunter	Washington C. H.
A. N. Van Deman	Washington C. H.

FRANKLIN COUNTY

R. E. Williams	Alton
D. D. Mosier	Brice
James G. Alcorn	Columbus
J. B. Alcorn	Columbus
Hugh Baldwin	Columbus
James F. Baldwin	Columbus
A. S. Barnes	Columbus
Jas. U. Barnhill	Columbus
M. A. Bartley	Columbus
W. F. Bay	Columbus
J. J. Beekman	Columbus
J. A. Beer	Columbus
J. E. Beery	Columbus

L. C. Benkert.....	Columbus	F. L. Keiser.....	Columbus
Casper H. Benson.....	Columbus	R. A. Kidd.....	Shepards
L. L. Bigelow.....	Columbus	D. R. Kinsell.....	Columbus
A. H. Binckley.....	Columbus	D. N. Kinsman.....	Columbus
M. E. Blackburn.....	Columbus	O. E. Kline.....	Columbus
Francis W. Blake.....	Columbus	E. T. Kuhn.....	Columbus
H. B. Blakey.....	Columbus	A. B. Landrum.....	Columbus
A. M. Bleile.....	Columbus	L. M. Lauferweiller.....	Columbus
Chas. F. Bowen.....	Columbus	F. F. Lawrence.....	Columbus
H. O. Bratton.....	Columbus	Robert Leach.....	Columbus
E. C. Brock.....	Columbus	Sherman Leach.....	Columbus
J. E. Brown.....	Columbus	B. E. Lindsey.....	Columbus
Howard H. Brundage.....	Columbus	C. P. Linhart.....	Columbus
E. C. Buck.....	Columbus	L. M. Lisle.....	Columbus
J. A. Burgoyne.....	Columbus	C. R. Longworth.....	Columbus
D. V. Burkett.....	Columbus	F. S. Lott.....	Columbus
E. E. Carlton.....	Columbus	Starling Loving.....	Columbus
J. S. Carlton.....	Columbus	J. J. Magruder.....	Columbus
F. S. Clark.....	Columbus	George H. Matson.....	Columbus
Chas. F. Clark.....	Columbus	Frank McCafferty.....	Columbus
Harriett B. Clark.....	Columbus	C. E. McClelland.....	Columbus
J. W. Clemmer.....	Columbus	J. A. McClure.....	Columbus
Geo. M. Clouse.....	Columbus	C. W. McClure.....	Columbus
N. R. Coleman.....	Columbus	C. W. McGavran.....	Columbus
D. W. Collison.....	Columbus	C. S. Means.....	Columbus
Rebecca V. Combs.....	Columbus	W. J. Means.....	Columbus
Robert M. Cook.....	Columbus	H. J. Means.....	Columbus
Jacob J. Coons.....	Columbus	G. T. Meek.....	Columbus
Albert Cooper.....	Columbus	William A. Method.....	Columbus
C. A. Cooperider.....	Columbus	H. E. Meyers.....	Columbus
T. E. Courtright.....	Columbus	George W. Miller.....	Columbus
Andre Crotti.....	Columbus	Albert C. Miller.....	Columbus
Frank H. Darby.....	Columbus	Dickson L. Moore.....	Columbus
F. H. Darley.....	Columbus	F. R. Morath.....	Columbus
A. B. Davenport.....	Columbus	G. W. Mosby.....	Columbus
W. C. Davis.....	Columbus	H. Y. Mosefield.....	Columbus
J. W. Dawson.....	Columbus	W. D. Murphy.....	Columbus
D. T. Dawson.....	Columbus	H. E. Myers.....	Columbus
A. Delaplane.....	Columbus	L. W. Neiswender.....	Columbus
C. D. Dennis.....	Columbus	G. Nessley.....	Columbus
W. D. Deuschle.....	Columbus	King A. Norris.....	Columbus
W. Dick.....	Columbus	T. B. Norris.....	Columbus
M. T. Dixon.....	Columbus	F. H. Obetz.....	Columbus
Verne A. Dodd.....	Columbus	N. P. Oglesby.....	Columbus
John Donley.....	Columbus	Ohio State University.....	Columbus
R. B. Drury.....	Columbus	C. T. Okey.....	Columbus
J. Dudley Dunham.....	Columbus	E. S. Omen.....	Columbus
J. M. Dunham.....	Columbus	J. E. Overly.....	Columbus
N. C. Dysart.....	Columbus	Parker W. Pheneger.....	Columbus
A. G. Elder.....	Columbus	E. M. Parrett.....	Columbus
C. T. Elder.....	Columbus	C. E. Pfeifer.....	Columbus
E. J. Emerick.....	Columbus	James McI. Phillips.....	Columbus
E. W. Euans.....	Columbus	W. G. Pickering.....	Columbus
A. E. Evans.....	Columbus	H. M. Platter.....	Columbus
H. H. Fisher.....	Columbus	C. D. Postle.....	Columbus
Marvin D. Fitch.....	Columbus	J. M. Pratt.....	Columbus
Fred Fletcher.....	Columbus	Joseph Price.....	Columbus
T. H. Frost.....	Columbus	Chas. O. Probst.....	Columbus
H. C. Gabriel.....	Columbus	A. M. Prout.....	Columbus
J. M. Gallen.....	Columbus	H. Prushing.....	Columbus
F. W. Gardner.....	Columbus	Walter E. Ranchous.....	Columbus
E. B. Gaver.....	Columbus	Theodore E. Rankin.....	Columbus
Chas. Gilliam.....	Columbus	F. R. Rarey.....	Columbus
D. Tod Gilliam.....	Columbus	John Rauschkolb.....	Columbus
E. M. Gilliam.....	Columbus	James M. Rector.....	Columbus
S. J. Goodman.....	Columbus	J. A. Reibel.....	Columbus
J. L. Gordon.....	Columbus	J. F. Reynolds.....	Columbus
E. J. Gordon.....	Columbus	R. A. Rice.....	Columbus
J. H. Hanes.....	Columbus	M. S. Richards.....	Columbus
C. S. Hamilton.....	Columbus	Rush Robinson.....	Columbus
E. A. Hamilton.....	Columbus	A. S. Rochester.....	Columbus
W. D. Hamilton.....	Columbus	H. A. Rodebaugh.....	Columbus
I. B. Hamblin.....	Columbus	G. W. Rodgers.....	Columbus
G. T. Harding.....	Columbus	Wm. K. Rodgers.....	Columbus
Wm. H. Harper.....	Columbus	C. C. Ross.....	Columbus
E. A. Harper.....	Columbus	G. O. Rowland.....	Columbus
I. B. Harris.....	Columbus	D. N. Sandoe.....	Columbus
C. L. Harrod.....	Columbus	D. G. Sanor.....	Columbus
E. M. Hattton.....	Columbus	G. C. Schaeffer.....	Columbus
A. M. Hauer.....	Columbus	G. H. Schauweker.....	Columbus
F. A. Heckler.....	Columbus	C. S. Schriver.....	Columbus
A. G. Helmick.....	Columbus	E. W. Schueller.....	Columbus
R. H. Henry.....	Columbus	Ernest Scott.....	Columbus
C. H. Hoffhine.....	Columbus	O. H. Sellenings.....	Columbus
J. E. Holmes.....	Columbus	R. J. Seymour.....	Columbus
Thos. C. Hoover.....	Columbus	R. J. Sharp.....	Columbus
Herman Hoppe.....	Columbus	Chas. J. Shepard.....	Columbus
E. G. Horton.....	Columbus	C. M. Shepard.....	Columbus
C. A. Howell.....	Columbus	E. R. Shilling.....	Columbus
W. D. Inglis.....	Columbus	P. D. Shriner.....	Columbus
J. F. Jones.....	Columbus	C. E. Silbernagle.....	Columbus
Emma O. Jones.....	Columbus	R. Blee Smith.....	Columbus
Alice M. Johnston.....	Columbus	Warren Smith.....	Columbus
R. R. Kahle.....	Columbus	H. H. Snively.....	Columbus

D. J. Snyder.....	Columbus
Carl L. Spohr.....	Columbus
A. L. Stage.....	Columbus
A. M. Steinfeld.....	Columbus
Frank L. Stillman.....	Columbus
George Stockton.....	Columbus
J. A. Stout.....	Columbus
T. J. Sullivan.....	Columbus
G. A. Sulzer.....	Columbus
A. Tachauer.....	Columbus
Robert C. Tarbell.....	Columbus
C. M. Taylor.....	Columbus
R. B. Taylor.....	Columbus
S. B. Taylor.....	Columbus
Wells Teachnor.....	Columbus
John M. Thomas.....	Columbus
Andrew J. Timberman.....	Columbus
F. W. Townsend.....	Columbus
Charles E. Turner.....	Columbus
J. H. J. Upham.....	Columbus
R. P. Ustick.....	Columbus
W. S. Van Fossen.....	Columbus
J. A. Van Fossen.....	Columbus
M. H. Virden.....	Columbus
B. C. Voorhees.....	Columbus
Yeatman Wardlow.....	Columbus
Frank Warner.....	Columbus
Geo. M. Waters.....	Columbus
Frank L. Watkins.....	Columbus
J. W. Wellons.....	Columbus
Harvey W. Whitaker.....	Columbus
Howard Whitehead.....	Columbus
Starling Wilcox.....	Columbus
F. J. Wilkiemeyer.....	Columbus
F. O. Williams.....	Columbus
Geo. L. Williams.....	Columbus
G. H. Williams.....	Columbus
Ed Williams.....	Columbus
J. C. Williamson.....	Columbus
Geo. W. Willard.....	Columbus
Edward J. Wilson.....	Columbus
Frank Winders.....	Columbus
Oliver N. Wolcott.....	Columbus
L. D. Wolfe.....	Columbus
A. C. Wolfe.....	Columbus
W. J. Woodlin.....	Columbus
Lafayette Woodruff.....	Columbus
J. R. Woods.....	Columbus
John W. Wright.....	Columbus
K. H. Yerets.....	Columbus
T. G. Youmans.....	Columbus
S. B. Winters.....	Briggsdale
D. W. Brickley.....	Canal Winchester
E. J. Carlton.....	Canal Winchester
Jno. E. Sheldon.....	Canal Winchester
L. McKittrick.....	Dublin
Chas. E. Jewett.....	Elmwood
Wm. A. Wilson.....	Gahanna
Wm. F. Ong.....	Galloway
G. W. Geissinger.....	Grove City
Frank C. Wright.....	Grove City
E. T. Tidd.....	Linden Heights
C. H. Wilson.....	Franklin
W. S. Scully.....	Reynoldsburg
R. A. Kidd.....	Shepard
W. Owen.....	Valley Crossing
M. E. Swinehart.....	Valley Crossing
Erminie H. Smallwood.....	Westerville
G. H. Mayhew.....	Westerville
T. L. Johnson.....	Worthington

FULTON COUNTY

I. Coy.....	Archbold
J. U. Fauster.....	Archbold
E. A. Murbach.....	Archbold
S. P. Bishop.....	Delta
P. S. Bishop.....	Delta
F. D. B. Waltz.....	Delta
A. M. Wilkins.....	Delta
T. H. Bingham.....	Fayette
Estell H. Rorick.....	Fayette
T. Blair.....	Lyons
C. H. Heffron.....	Metamora
Geo. McGuffin.....	Pettisville
H. C. Bralley.....	Swanton
A. B. Lathrop.....	Swanton
C. S. Campbell.....	Wauseon
G. W. Hartman.....	Wauseon
P. J. Lenhart.....	Wauseon
W. H. Maddox.....	Wauseon
J. H. Miller.....	Wauseon

GALLIA COUNTY

Geo. A. Barton.....	Addison
T. R. Fletcher.....	Bidwell

W. J. Fletcher.....	Chambersburg
Chas. W. Ely.....	Cheshire
J. W. Barger.....	Crown City
E. M. Martindale.....	Crown City
George K. Ewing.....	Ewington
E. G. Alcorn.....	Gallipolis
Mary L. Austin.....	Gallipolis
L. C. Bean.....	Gallipolis
Jehu Eakin.....	Gallipolis
G. G. Edwards.....	Gallipolis
C. A. Holzer.....	Gallipolis
George G. Kineon.....	Gallipolis
Ella G. Lupton.....	Gallipolis
Chas. G. Parker.....	Gallipolis
Claud B. Parker.....	Gallipolis
Wm. H. Pritchard.....	Gallipolis
Milo Wilson.....	Gallipolis
C. A. Rife.....	Kyger
H. V. Lusher.....	Mercerville
Sathiel W. Williams.....	Mercerville
Robert A. Howell.....	Patrolt
L. R. Fletcher.....	Pine Grove
W. E. Howell.....	Rio Grande
William Miller.....	Thurman
Alpha T. Clark.....	Vinton
Rufus D. Jacobs.....	Vinton
Wellington Wilcox.....	Vinton

GEAUGA COUNTY

I. T. Cramton.....	Burton
A. D. Warner.....	Burton
J. R. Davis.....	Chardon
F. S. Pomeroy.....	Chardon
J. A. Heeley.....	Parkman
C. E. James.....	Troy

GREENE COUNTY

David W. Bedinger.....	Bellbrook
George C. Hook.....	Bellbrook
Charles E. Ream.....	Bowersville
Miron I. Marsh.....	Cedarville
J. O. Stewart.....	Cedarville
David E. Spahr.....	Clifton
H. A. Cosler.....	Fairfield
C. L. Jones.....	Jamestown
L. M. Jones.....	Jamestown
Clark J. Lackey.....	Jamestown
Frank W. Ogan.....	Jamestown
Thomas B. Crabill.....	Osborn
P. C. Marquart.....	Osborn
H. O. Whittaker.....	New Burlington
George Davis.....	New Jasper
William J. Rouse.....	Paintersville
Joseph Fudge.....	Spring Valley
R. W. Smith.....	Spring Valley
A. D. Dehaven.....	Xenia
James P. Dice.....	Xenia
William H. Finley.....	Xenia
William A. Galloway.....	Xenia
Clark M. Galloway.....	Xenia
Robert H. Grube.....	Xenia
Warren C. Hewitt.....	Xenia
Pearl Madden.....	Xenia
H. R. McClellan.....	Xenia
Ben R. McClellan.....	Xenia
C. G. McPherson.....	Xenia
Asa C. Messenger.....	Xenia
Samuel S. Wilson.....	Xenia
W. H. Humphreys.....	Yellow Springs
Lester J. Taylor.....	Yellow Springs

GUERNSEY COUNTY

E. L. Louthia.....	Byesville
W. N. Bradford.....	Cambridge
C. A. Frame.....	Cambridge
H. A. Green.....	Cambridge
Fred J. Harrison.....	Cambridge
Albert B. Headley.....	Cambridge
George W. Hixon.....	Cambridge
C. R. Johnson.....	Cambridge
W. G. Lane.....	Cambridge
Fred W. Lane.....	Cambridge
O. F. Lowery.....	Cambridge
F. M. Mitchell.....	Cambridge
C. A. Moore.....	Cambridge
T. H. Rowles.....	Cambridge
H. H. Bown.....	Pleasant City
H. I. Woodburn.....	Corryville

HAMILTON COUNTY

N. W. Abbott.....	Cincinnati
D. H. Abbott.....	Cincinnati
J. M. Adams.....	Cincinnati

C. C. Agin.....	Cincinnati	C. C. Fihe.....	Cincinnati
H. W. Albers.....	Cincinnati	H. D. Fitch.....	Cincinnati
G. H. Albers.....	Cincinnati	V. Fitzpatrick.....	Cincinnati
S. E. Allen.....	Cincinnati	H. M. Fletcher.....	Cincinnati
G. M. Allen.....	Cincinnati	A. W. Foertmeyer.....	Cincinnati
E. D. Allgaier.....	Cincinnati	C. Foertmeyer.....	Cincinnati
G. C. Altmeier.....	Cincinnati	L. J. Fogel.....	Cincinnati
G. H. Astler.....	Cincinnati	F. Forchheimer.....	Cincinnati
C. S. Ashfield.....	Cincinnati	W. Forchheimer.....	Cincinnati
H. Aufmwasser.....	Hamilton	Starr Ford.....	Cincinnati
S. C. Ayres.....	Cincinnati	R. W. C. Francis.....	Cincinnati
W. McLean Ayres.....	Cincinnati	A. H. Freiberg.....	Cincinnati
G. H. Baker.....	Cincinnati	A. Friedlander.....	Cincinnati
Theo. Bange.....	Cincinnati	R. C. Gaston.....	Cincinnati
F. Bacharach.....	Cincinnati	W. J. Gavin.....	Cincinnati
Emma Batcheler.....	Cincinnati	O. P. Geier.....	Cincinnati
M. L. Bates.....	Cincinnati	W. Gillespie.....	Cincinnati
A. C. Bauer.....	Cincinnati	Bertha L. Gleaser.....	Cincinnati
A. J. Bell.....	Cincinnati	P. W. Good.....	Cincinnati
W. H. Bell.....	Cincinnati	Charles Goosman.....	Cincinnati
Oscar Berghausen.....	Cincinnati	J. E. Greive.....	Cincinnati
Brooks F. Beebe.....	Cincinnati	W. R. Griess.....	Cincinnati
H. W. Bettman.....	Cincinnati	S. B. Grimes.....	Cincinnati
H. M. Box.....	Cincinnati	W. H. Grimes.....	Cincinnati
Ruth Bernheim.....	Sta. S.	J. B. Grothaus.....	Cincinnati
Charles L. Bonifield.....	Cincinnati	W. D. Haines.....	Cincinnati
M. B. Brady.....	Tusculum	J. A. Hall.....	Cincinnati
F. E. Bratt.....	Cincinnati	B. R. B. Hass.....	Cincinnati
George R. Bray.....	Cincinnati	D. C. Handley.....	Cincinnati
W. L. Brodberger.....	Cincinnati	P. G. Harff.....	Cincinnati
C. J. Broeman.....	Cincinnati	W. C. Harris.....	Cincinnati
A. L. Brown.....	Cincinnati	T. P. Hart.....	Cincinnati
H. A. Brown.....	Cincinnati	C. E. Hauser.....	Cincinnati
M. A. Brown.....	Hamilton	Gustav Hausser.....	Cincinnati
J. E. Brown.....	Cincinnati	C. F. Hegner.....	Cincinnati
F. Brunning.....	Cincinnati	M. L. Heidingsfeld.....	Cincinnati
F. M. Burns.....	Cincinnati	C. D. Heisel.....	Cincinnati
H. Buschman.....	Cincinnati	F. F. Hellman.....	Cincinnati
J. C. Buttemiller.....	Cincinnati	H. F. Held.....	Cincinnati
G. S. Buttemiller.....	Cincinnati	F. W. Hendley.....	Cincinnati
J. S. Caldwell.....	Cincinnati	W. C. Herman.....	Cincinnati
J. A. Caldwell.....	Cincinnati	A. B. Heyl.....	Cincinnati
C. E. Caldwell.....	Cincinnati	D. S. Heyn.....	Cincinnati
B. Frank Cain.....	Cincinnati	L. G. Heyn.....	Cincinnati
O. L. Cameron.....	Cincinnati	Carl Hiller.....	Cincinnati
Elizabeth Campbell.....	Cincinnati	W. H. Hilkewitz.....	Cincinnati
W. H. Campbell.....	Cincinnati	H. H. Hines.....	Cincinnati
Robert Carothers.....	Cincinnati	G. A. Hinnen.....	Cincinnati
Julia W. Carpenter.....	Cincinnati	Elizabeth Hocker.....	Cincinnati
Lily Carpenter.....	Cincinnati	Francis M. Hollingshead.....	Sta. I.
T. Carroll.....	Cincinnati	C. R. Holmes.....	Cincinnati
A. I. Carson.....	Cincinnati	O. P. Holt.....	Cincinnati
J. B. Casell.....	Cincinnati	H. H. Hoppe.....	Cincinnati
C. H. Castle.....	Cincinnati	L. P. Hottendorf.....	Cincinnati
T. A. Christen.....	Cincinnati	C. E. Howard.....	Cincinnati
O. P. Coe.....	Cincinnati	M. H. Hull.....	Cincinnati
R. B. Cofield.....	Cincinnati	A. E. Hussey.....	Cincinnati
A. P. Cole.....	Cincinnati	Samuel Iglaue.....	Cincinnati
S. E. Cone.....	Cincinnati	C. E. Iliff.....	Cincinnati
A. R. Conner.....	Cincinnati	Frances H. Iliff.....	Cincinnati
H. J. Cook.....	Cincinnati	R. Ingram.....	Cincinnati
J. J. Cook.....	Sta. N.	James Irvin.....	Cincinnati
L. A. Cornish.....	Cincinnati	A. E. Isham.....	Cincinnati
H. C. Cragg.....	Cincinnati	W. G. Jacobs.....	Cincinnati
C. G. Crisler.....	Cincinnati	P. X. Jacobs.....	Cincinnati
Frank B. Cross.....	Cincinnati	J. J. Jennie.....	Cincinnati
Nora Crotty.....	Cincinnati	W. Johnson.....	Cincinnati
E. A. Curry.....	Cincinnati	E. A. Johnston.....	Cincinnati
N. P. Dandridge.....	Cincinnati	J. A. Johnston.....	Cincinnati
D. J. Davies.....	Cincinnati	E. C. Juler.....	Cincinnati
C. W. Davis.....	Cincinnati	I. D. Jones.....	Cincinnati
J. D. Davis.....	Cincinnati	R. C. Jones.....	Cincinnati
W. C. DeCourcy.....	Cincinnati	G. S. Junkerman.....	Cincinnati
L. M. Denman.....	Cincinnati	J. W. Kautz.....	Cincinnati
A. B. Devers.....	Cincinnati	E. M. Keefe.....	Cincinnati
E. J. Dickey.....	Cincinnati	W. S. Keller.....	Cincinnati
H. P. Diekmeyer.....	Cincinnati	W. C. Kendig.....	Cincinnati
J. W. Dodds.....	Cincinnati	J. Keyser.....	Cincinnati
L. Domhoff.....	Cincinnati	E. Khuon.....	Cincinnati
William M. Doughty.....	Cincinnati	W. E. Kiely.....	Cincinnati
G. F. Dowling.....	Cincinnati	C. King.....	Cincinnati
M. Dreyfoos.....	Cincinnati	F. C. King.....	Cincinnati
A. G. Drury.....	Cincinnati	J. B. King.....	Cincinnati
H. K. Dunham.....	Cincinnati	George H. Knapp.....	Cincinnati
W. H. Dunham.....	Cincinnati	E. T. Knoop.....	Cincinnati
Julius Eichberg.....	Cincinnati	M. Koehler.....	Cincinnati
E. W. Enz.....	Cincinnati	F. F. Kramer.....	Cincinnati
John C. Erwin.....	Cincinnati	S. P. Kramer.....	Cincinnati
G. A. Fackler.....	Cincinnati	A. G. Kreidler.....	Cincinnati
Albert Faller.....	Cincinnati	L. J. Krouse.....	Cincinnati
W. H. Falls.....	Cincinnati	J. C. Kunz.....	Cincinnati
E. L. Fayen.....	Cincinnati	Frank H. Lamb.....	Cincinnati
F. E. Fee.....	Cincinnati	F. W. Lamb.....	Cincinnati
G. W. Fels.....	Cincinnati	J. H. Landis.....	Cincinnati

J. H. Landman.....	Cincinnati	O. B. Schmall.....	Cincinnati
C. A. Langdale.....	Cincinnati	F. W. Schmidt.....	Cincinnati
F. W. Langdon.....	Cincinnati	Wm. C. Schmitter.....	Cincinnati
E. F. Landy.....	Cincinnati	Moses Scholtz.....	Cincinnati
Sidney Lange.....	Cincinnati	P. E. Schorr.....	Cincinnati
Inez Lapsley.....	Cincinnati	L. C. Schrickel.....	Cincinnati
W. E. Lewis.....	Cincinnati	J. H. Schroeder.....	Cincinnati
Bertha Lietze.....	Cincinnati	Louis Schwab.....	Cincinnati
A. J. Light.....	Cincinnati	C. A. Schwagmeyer.....	Cincinnati
Walter Lineback.....	Cincinnati	J. H. Shaw.....	Cincinnati
L. P. Linss.....	Cincinnati	W. E. Shaw.....	Cincinnati
K. Little.....	Cincinnati	W. S. Shollenbarger.....	Cincinnati
B. F. Lyle.....	Cincinnati	E. H. Shields.....	Cincinnati
R. D. Maddox.....	Cincinnati	Edmund Shields.....	Cincinnati
Charles Maertz.....	Cincinnati	Percy Shields.....	Cincinnati
J. E. Marcus.....	Cincinnati	Francis X. Siegel.....	Cincinnati
G. E. Malsbery.....	Cincinnati	J. B. Singleton.....	Cincinnati
J. C. Marcus.....	Cincinnati	S. P. Sings.....	Cincinnati
E. S. May.....	Cincinnati	Edith Smith.....	Cincinnati
E. F. McCarthy.....	Cincinnati	B. D. Smith.....	Cincinnati
C. R. McClure.....	Cincinnati	E. O. Smith.....	Cincinnati
E. S. McKee.....	Cincinnati	S. H. Smith.....	Cincinnati
J. C. McKenzie.....	Cincinnati	J. R. Smith.....	Cincinnati
James F. McKibben.....	Cincinnati	F. M. Solar.....	Cincinnati
F. H. McMechan.....	Cincinnati	C. T. Souther.....	Cincinnati
Wade McMillen.....	Cincinnati	H. V. A. Spargur.....	Cincinnati
C. H. Meyres.....	Cincinnati	C. G. E. Speidel.....	Cincinnati
F. Micketta.....	Cincinnati	Byron Stanton.....	Cincinnati
I. C. Miller.....	Cincinnati	Sigmar Stark.....	Cincinnati
J. D. Miller.....	Cincinnati	A. D. Stapleford.....	Cincinnati
J. W. Miller.....	Cincinnati	J. E. Stemler.....	Cincinnati
R. W. Miller.....	Cincinnati	Robert Stevenson.....	Cincinnati
W. L. Milner.....	Cincinnati	J. W. Stevenson.....	Cincinnati
E. W. Mitchell.....	Cincinnati	R. W. Stewart.....	Cincinnati
W. Mithoefer.....	Cincinnati	Walter Strix.....	Cincinnati
L. A. Molony.....	Cincinnati	L. K. Stoll.....	Cincinnati
A. F. Morganstern.....	Cincinnati	E. O. Straehley.....	Cincinnati
C. H. Mueller.....	Cincinnati	L. Stricker.....	Cincinnati
Wm. Muhlbarg.....	Cincinnati	W. H. Strietmann.....	Cincinnati
J. W. Murphy.....	Cincinnati	Geo. Stroback.....	Cincinnati
W. E. Murphy.....	Cincinnati	S. C. Swartsell.....	Cincinnati
R. D. Mussey.....	Cincinnati	C. W. Tangeman.....	Cincinnati
C. A. Neal.....	Cincinnati	M. A. Tate.....	Cincinnati
A. W. Nelson.....	Cincinnati	E. B. Tauber.....	Cincinnati
E. A. North.....	Cincinnati	W. J. Taylor.....	Cincinnati
M. O'Hare.....	Cincinnati	R. T. Taylor.....	Cincinnati
J. C. Oliver.....	Cincinnati	L. G. Tedesche.....	Cincinnati
G. B. Orr.....	Cincinnati	J. H. Thesing.....	Cincinnati
W. D. Porter.....	Cincinnati	F. C. Theiss.....	Cincinnati
A. E. Osmond.....	Cincinnati	R. W. Thomas.....	Cincinnati
F. M. Oxley.....	Cincinnati	E. H. Thompson.....	Cincinnati
C. D. Palmer.....	Cincinnati	J. A. Thompson.....	Cincinnati
D. W. Palmer.....	Cincinnati	Wade Thrasher.....	Cincinnati
C. M. Paul.....	Cincinnati	A. B. Thrasher.....	Cincinnati
William Pauli.....	Cincinnati	J. M. Topmoeller.....	Cincinnati
C. T. Pearce.....	Cincinnati	J. E. Townsley.....	Cincinnati
Arthur Pfeiffer.....	Cincinnati	J. Trush.....	Cincinnati
F. D. Phinney.....	Cincinnati	I. F. Tunison.....	Cincinnati
J. E. Pirrung.....	Cincinnati	S. B. Tuthill.....	Cincinnati
J. S. Podesta.....	Cincinnati	J. L. Tuechter.....	Cincinnati
A. C. Poole.....	Cincinnati	G. B. Twitchell.....	Cincinnati
Eugene O. Porter.....	Cincinnati	M. H. Urner.....	Cincinnati
William D. Porter.....	Cincinnati	D. T. Vail.....	Cincinnati
E. O. Pucklitsch.....	Cincinnati	C. B. Van Meter.....	Cincinnati
L. A. Querner.....	Cincinnati	N. C. Vaughan.....	Cincinnati
Allen Ramsey.....	Cincinnati	F. C. Vogel.....	Cincinnati
John Ranley.....	Cincinnati	Arthur Vos.....	Cincinnati
Joseph Ransohoff.....	Cincinnati	E. W. Walker.....	Cincinnati
B. K. Ratchford.....	Cincinnati	Millard Wallenstein.....	Cincinnati
F. L. Rattermann.....	Cincinnati	J. Watson.....	Cincinnati
B. J. Ratterman.....	Cincinnati	Walter B. Weaver.....	Cincinnati
J. L. Ransohoff.....	Cincinnati	D. E. Weaver.....	Cincinnati
A. Ravogil.....	Cincinnati	Dudley Webb.....	Cincinnati
Victor Ray.....	Cincinnati	A. G. Webb.....	Cincinnati
C. A. L. Reed.....	Cincinnati	W. H. Wenning.....	Cincinnati
E. B. Reemelin.....	Cincinnati	George H. Werk.....	Sta. L, Cincinnati
A. P. Renneker.....	Cincinnati	C. L. Werthelmer.....	Cincinnati
G. B. Rhodes.....	Cincinnati	H. J. Whitacre.....	Cincinnati
B. M. Ricketts.....	Cincinnati	Marion Whitacre.....	Cincinnati
H. C. Robinson.....	Cincinnati	J. H. Williams.....	Cincinnati
C. S. Rockhill.....	Cincinnati	B. A. Williams.....	Sta. K, Cincinnati
Chas. Rogers.....	Cincinnati	Martha R. Williams.....	Cincinnati
S. Rothenberg.....	Cincinnati	J. G. Williams.....	Cincinnati
J. W. Rowe.....	Cincinnati	B. C. Willis.....	Cincinnati
Ida B. Rulison.....	Cincinnati	J. B. Wilson.....	Cincinnati
Moses Salzer.....	Cincinnati	C. F. Winton.....	Cincinnati
F. B. Samson.....	Cincinnati	J. M. Withrow.....	Cincinnati
Edwin Sandy.....	Cincinnati	W. R. Woodward.....	Cincinnati
Robert Sattler.....	Cincinnati	H. L. Woodward.....	Cincinnati
Eric E. Sattler.....	Cincinnati	Jesse S. Wyler.....	Cincinnati
A. F. Saunders.....	Cincinnati	W. B. Young.....	Cincinnati
W. E. Schenk.....	Cincinnati	A. A. Yungblut.....	Cincinnati
Frank Scheerer.....	Cincinnati	Philip Zenner.....	Cincinnati
C. F. Schiele.....	Cincinnati	E. G. Zinke.....	Cincinnati

E. A. Fox.....Carthage
 F. W. Harmon.....Carthage
 W. C. Kendig.....Carthage
 W. E. List.....Carthage
 W. Saffin.....Carthage
 H. I. Woodburn.....Corryville
 J. F. Heady.....Glendale
 H. S. James.....Glendale
 R. Southworth.....Glendale
 O. W. Butler.....Hartwell
 B. F. Lehman.....Home City
 George Arnold.....Madisonville
 G. L. Kreiger.....Madisonville
 A. L. Knight.....Madisonville
 C. L. Metz.....Madisonville
 George Pierrett.....Madisonville
 R. C. Belt.....Milford
 E. M. Baehr.....Norwood
 J. C. Cadwallader.....Norwood
 C. S. Chamberlain.....Norwood
 J. S. Meserve.....Norwood
 J. J. Winn.....Norwood
 W. S. Yeager.....Oakley
 G. O. Sikes.....Pleasant Ridge
 W. N. Bragg.....Reading
 A. H. Carr.....Reading
 A. C. Topie.....St. Bernard
 P. Gillispie.....Wyoming

HANCOCK COUNTY

Robert B. Taylor.....Arcadia
 E. B. Taylor.....Arcadia
 J. W. H. Beach.....Arlington
 James H. Varnum.....Benton Ridge
 R. D. Whisler.....Benton Ridge
 Joseph P. Baker.....Findlay
 Don B. Biggs.....Findlay
 E. H. Cooper.....Findlay
 John M. Firmin.....Findlay
 John V. Hartman.....Findlay
 D. C. Hughes.....Findlay
 Anson Hurd.....Findlay
 Jacob A. Kimmell.....Findlay
 Albert H. Linaweaver.....Findlay
 N. L. McLaughlin.....Findlay
 William C. Neibling.....Findlay
 Oliver H. Saunders.....Findlay
 Earle Jesse Thomas.....Findlay
 J. C. Tritch.....Findlay
 Milton S. Williamson.....Findlay
 Theron S. Wilson.....Findlay
 W. N. Yost.....Findlay
 William J. Zopfi.....Findlay
 Albert J. Reyecraft.....Fostoria
 J. L. Higbee.....Jenera
 James M. Ruckman.....Jenera
 Richard N. Lee.....Mt. Blanchard
 M. A. Darbyshire.....McComb
 Edward G. Hersh.....McComb
 C. D. Todd.....McComb
 E. E. Courtright.....Shawton
 Edward George.....Van Buren
 H. J. Powell.....Van Buren
 Willis M. Metzler.....Vanlue
 James L. Schrote.....Vanlue

HARDIN COUNTY

L. W. Campbell.....Ada
 West Montgomery.....Ada
 S. C. Smith.....Ada
 R. L. Souder.....Ada
 J. S. Hedrick.....Dunkirk
 C. C. McLaughlin.....Dunkirk
 Frank D. Bain.....Kenton
 W. A. Belt.....Kenton
 H. E. Hiestand.....Kenton
 Robert E. Lawless.....Kenton
 C. D. McCoy.....Kenton
 A. S. McKittrick.....Kenton
 D. P. Phillips.....Kenton
 Elmer S. Protzman.....Kenton
 Jesse Snodgrass.....Kenton
 W. C. Snodgrass.....Kenton
 J. B. K. Evans.....McGuffey

HARRISON COUNTY

John S. Campbell.....Cadiz
 Samuel B. McGavran.....Cadiz
 J. A. McGrew.....New Athens
 Ross P. Rusk.....Cadiz
 E. T. Kuhn.....Hopedale
 W. C. Ramsey.....Hopedale
 A. C. Grove.....Jewett

J. A. McGrew.....New Athens
 W. A. Anderson.....Scioto

HENRY COUNTY

J. R. Bolles.....Holgate
 D. E. Haag.....Liberty Center
 Harry P. Haag.....Liberty Center
 J. W. Sharpe.....McClure
 John Bloomfield.....Napoleon
 F. M. Harrison.....Napoleon
 A. E. H. Maerker.....Napoleon
 Charles Mowry.....Napoleon
 H. F. Rohrs.....Napoleon
 J. C. Miller.....New Bavaria
 John L. Brubaker.....West Hope

HIGHLAND COUNTY

T. W. Roberds.....Bell
 J. W. Mathews.....Buford
 R. L. Dunlap.....Greenfield
 R. J. Jones.....Greenfield
 W. H. Wilson.....Greenfield
 A. H. Beam.....Hillsboro
 H. M. Brown.....Hillsboro
 W. W. Glenn.....Hillsboro
 N. B. Lafferty.....Hillsboro
 J. C. Larkin.....Hillsboro
 J. D. McBride.....Hillsboro
 V. B. McConnaughey.....Hillsboro
 L. Nelson.....Hillsboro
 T. M. Thomas.....Hillsboro
 George Cliness.....Leesburg
 R. E. Holmes.....Leesburg
 Kirke R. Teachnor.....Leesburg
 T. W. Duvall.....Lynchburg
 J. T. Gibson.....Lynchburg
 J. B. Kleckner.....Lynchburg
 W. G. Rhoten.....Mowrystown
 C. E. Cropper.....New Market
 F. M. Granger.....Russell
 J. N. Ellison.....Sardinia
 H. W. Chaney.....Sugartree Ridge

HOCKING COUNTY

W. S. Rhodes.....Carbon Hill
 C. F. Alpin.....Logan
 D. A. Rannels.....Logan
 A. K. Smith.....Logan
 M. E. Cox.....Murray
 T. J. Dillinger.....Murray
 J. H. Elias.....Murray
 E. H. Hayman.....Murray
 A. P. Lee.....Murray
 W. H. Tippie.....Murray

HOLMES COUNTY

Frank D. Carson.....Benton
 John Jones.....Glenmount
 D. S. Olmstead.....Millersburg
 Ralph C. Wise.....Millersburg
 Simon P. Wise.....Millersburg

HURON COUNTY

H. R. Dewey.....Bellevue
 F. Marion Kent.....Bellevue
 C. J. Wehr.....Bellevue
 H. G. Blaine.....Chicago
 G. C. McCreight.....Chicago
 Daniel W. Rumbaugh.....Chicago
 M. Hindley.....Monroeville
 B. C. Pilkey.....Monroeville
 E. W. Crecelius.....Monroeville
 Wm. E. Gill.....Norwalk
 E. N. Hawley.....Norwalk
 D. W. Loney.....Norwalk
 Ralph L. Morse.....Norwalk
 A. L. Osborn.....Norwalk
 S. E. Simmons.....Norwalk
 John A. Sipher.....Norwalk
 J. F. Mayne.....Olena
 Frank E. Weeks.....R. F. D. 1, Wakeman

JACKSON COUNTY

A. G. Ray.....Byer
 J. H. Ray.....Coalton
 E. S. Ray.....Hamden Junction
 W. R. Evans.....Jackson
 J. L. Gahm.....Jackson
 J. S. Hunter.....Jackson
 J. J. McClung.....Jackson
 W. A. Ray.....Jackson
 W. E. Williams.....Jackson

E. J. Jones.....Oak Hill
G. E. Jones.....Oak Hill
O. R. Shaffer.....Peniel
E. T. Dando.....Wellston
D. W. Davis.....Wellston
Wm. J. Ogier.....Wellston
W. H. Parker.....Wellston
John E. Sylvester.....Wellston

JEFFERSON COUNTY

W. A. Lindsay.....Amsterdam
J. W. Carson.....Bergholz
J. C. Jones.....Dillonvale
H. L. Fiscus.....East Springfield
J. P. Young.....Empire
E. H. Rea.....Irondale
F. H. Rind.....Mingo Junction
W. A. Strayer.....Mingo Junction
A. A. Sweet.....Mingo Junction
W. D. Hoge.....Rayland
H. S. Maxwell.....Richmond
W. H. Wood.....Smithfield
S. O. Barkhurst.....Steubenville
Theodore Dodd.....Steubenville
Geo. W. Fitzsimmons.....Steubenville
J. C. M. Floyd.....Steubenville
W. E. Kerr.....Steubenville
Robert Laughlin.....Steubenville
C. Laughlin.....Steubenville
J. J. McCoy.....Steubenville
J. A. McCullough.....Steubenville
J. E. Miller.....Steubenville
J. R. Montgomery.....Steubenville
J. R. Mossgrrove.....Steubenville
Enoch Pearce.....Steubenville
S. J. Podlewski.....Steubenville
J. F. Purviance.....Steubenville
Joseph Robertson.....Steubenville
T. W. Walker.....Steubenville
Rudolph Von Muralt.....Tiltonville
J. W. Collins.....Toronto
Reginald A. Matthews.....Toronto
H. C. Minor.....Toronto
J. M. Watt.....Toronto

KNOX COUNTY

Walter Putnam.....Brink Haven
S. O. Gantt.....Centerburg
R. E. Cole.....Democracy
E. V. Ackerman.....Frederickton
W. H. Eastman.....Frederickton
J. H. Norrick.....Frederickton
David Watson.....Frederickton
A. D. Welker.....Gambier
J. S. Workman.....Gambier
J. W. Buxton.....Howard
J. F. Shrontz.....Martinsburg
W. E. Shrontz.....Martinsburg
R. B. McLaughlin.....Mt. Liberty
H. W. Blair.....Mt. Vernon
R. W. Colville.....Mt. Vernon
C. B. Conwell.....Mt. Vernon
S. E. Deeley.....Mt. Vernon
V. L. Fisher.....Mt. Vernon
B. F. Humbert.....Mt. Vernon
F. C. Larimore.....Mt. Vernon
J. F. Lee.....Mt. Vernon
W. W. Pennell.....Mt. Vernon
F. L. Singery.....Mt. Vernon
T. A. Huggins.....Sparta

LAWRENCE COUNTY

Wm. Shattuck.....Coal Grove
Thos H. Remy.....Hanging Rock
Frank D. Campbell.....Rock Camp
C. E. Townsend.....Steece
E. E. Shaffer.....Willow Wood
H. J. Brown.....Ironton
O. B. Dunn.....Ironton
W. S. Eakman.....Ironton
J. E. Finley.....Ironton
C. C. Gallagher.....Ironton
Daniel Gray.....Ironton
Lester Keller.....Ironton
J. W. Lowry.....Ironton
A. Clark Lowery.....Ironton
Wm. F. Marting.....Ironton
Wm. R. Moore.....Ironton
Nat. K. Moxley.....Ironton
Oliver U. O'Neill.....Ironton
Wm. E. Pricer.....Ironton
H. S. Reger.....Ironton
John Shattuck.....Ironton
Elmer E. Wells.....Ironton

J. M. White.....Ironton
J. S. Wiseman.....Ironton

LAKE COUNTY

Henry S. York.....Fairport
S. D. Good.....Madison
Charles H. Quayle.....Madison
J. V. Winans.....Madison
Allen J. Ingersoll.....Mentor
J. W. Lowe.....Mentor
H. M. Amidon.....Painesville
A. P. Brady.....Painesville
Howard M. Carmedy.....Painesville
A. J. Fisher.....Painesville
A. L. Gardner.....Painesville
H. W. Grauel.....Painesville
C. M. Hawley.....Painesville
Charles F. House.....Painesville
H. L. Spence.....Painesville
G. H. Wilson.....Painesville
J. N. Black.....Perry
O. C. Haush.....Perry
T. M. Moore.....Willoughby

LICKING COUNTY

Ernest J. Barnes.....Granville
James D. Thompson.....Granville
W. E. Barr.....Croton
W. L. Evans.....Hanover
Henry B. Anderson.....Newark
J. W. Barker.....Newark
B. Frank Barnes.....Newark
U. K. Esington.....Newark
Clark B. Hatch.....Newark
Charles P. King.....Newark
William H. Knauss.....Newark
J. P. Latimer.....Newark
C. F. Legge.....Newark
R. E. McCullough.....Newark
D. J. Price.....Newark
W. C. Rank.....Newark
S. S. Richards.....Newark
J. G. Shirer.....Newark
Anderson T. Speer.....Newark
J. P. H. Stedem.....Newark
C. H. Stimson.....Newark
W. S. Turner.....Newark
William E. Wright.....Newark
F. P. Deatherman.....Oultville
C. J. Loveless.....Perrytown
J. D. Rouse.....St. Louisville

LOGAN COUNTY

J. C. Banning.....Belle Centre
R. C. McNacl.....Belle Centre
W. S. Phillips.....Belle Centre
Robert Butler.....Bellefontaine
J. S. Deemy.....Bellefontaine
S. W. Fuller.....Bellefontaine
G. W. Stinchcomb.....Bellefontaine
P. D. Covington.....Bellefontaine
W. W. Hamer.....Bellefontaine
Edward R. Henning.....Bellefontaine
F. B. Kaylor.....Bellefontaine
A. J. McCracken.....Bellefontaine
W. C. Pay.....Bellefontaine
Lester C. Pratt.....Bellefontaine
L. L. Pratt.....Bellefontaine
Carrie Richeson.....Bellefontaine
G. H. Swan.....Bellefontaine
J. H. Wilson.....Bellefontaine
F. M. Galer.....De Graff
O. W. Loffer.....De Graff
J. A. Wolfe.....De Graff
R. D. Clippinger.....East Liberty
J. S. Montgomery.....Huntsville
Frank Richardson.....Huntsville
A. J. Foreman.....Lewiston
A. M. Curl.....Quincy
F. E. Detrich.....Quincy
N. V. Speece.....Quincy
C. N. Fisher.....Rushsylvania
A. C. Brindle.....West Liberty
J. Croft.....West Liberty
B. B. Leonard.....West Liberty
B. S. Leonard.....West Liberty

LOBAIN COUNTY

E. H. Sheffield.....Elyria
Henry Sheffield.....Elyria
H. D. Baldwin.....Elyria
George Black.....Elyria
Charles F. Cushing.....Elyria

C. H. Cushing.....Elyria
 George E. French.....Elyria
 George Gill.....Elyria
 W. E. Hart.....Elyria
 William B. Hubbell.....Elyria
 O. T. Maynard.....Elyria
 Russell McClure.....Elyria
 H. M. Metcalf.....Elyria
 W. H. Patrick.....Elyria
 J. V. Sampsell.....Elyria
 John W. Lindsey.....La Grange
 William S. Baldwin.....Lorain
 George K. Beyer.....Lorain
 E. O. S. Brown.....Lorain
 Evan Cameron.....Lorain
 Samuel S. Cox.....Lorain
 George M. Crawford.....Lorain
 William F. Dagger.....Lorain
 John B. Donaldson.....Lorain
 T. A. Elson.....Lorain
 Abram N. Garver.....Lorain
 C. V. Garver.....Lorain
 J. R. Gilbert.....Lorain
 Birt E. Grover.....Lorain
 Albert G. Grills.....Lorain
 Wm. W. Hoffman.....Lorain
 Wm. C. Hoge.....Lorain
 Edward V. Hug.....Lorain
 John McGervy.....Lorain
 Andrew J. McNamara.....Lorain
 Jas. Mead.....Lorain
 O. B. Monosmith.....Lorain
 S. Vincent Burley.....Lorain
 Albert M. Webster.....Lorain
 Wm. E. Wheatley.....Lorain
 Washington Foster.....North Amherst
 H. L. Hall.....North Amherst
 Isaac N. Okes.....North Ridgeville
 C. H. Browning.....Oberlin
 Wm. C. Bunce.....Oberlin
 A. B. Everett.....Oberlin
 G. G. Jameson.....Oberlin
 M. T. Runyon.....Oberlin
 W. F. Thatcher.....Oberlin
 A. B. Smith.....Wellington

LUCAS COUNTY

N. A. Cook.....Sylvania
 Gustav Aftel.....Toledo
 Wm. W. Alderdyce.....Toledo
 F. W. Alter.....Toledo
 D. C. Ayres.....Toledo
 Herman Bamberger.....Toledo
 Bernard Becker.....Toledo
 Jno. E. Belding.....Toledo
 Robinson Bell.....Toledo
 C. A. Berger.....Toledo
 James M. Bessy.....Toledo
 Chas. Betts.....Toledo
 R. L. Bidwell.....Toledo
 P. J. Bidwell.....Toledo
 David E. Bowman.....Toledo
 Geo. B. Booth.....Toledo
 Walter W. Brand.....Toledo
 L. A. Brewcr.....Toledo
 L. W. Briggs.....Toledo
 Oshea S. Brigham.....Toledo
 Basil B. Brimm.....Toledo
 Porter B. Brockway.....Toledo
 N. W. Brown.....Toledo
 Wm. T. Burke.....Toledo
 Chas. A. Burritt.....Toledo
 James Caldwell.....Toledo
 F. J. Champney.....Maumee
 George L. Chapman.....Toledo
 B. G. Chollett.....Toledo
 L. D. Clark.....Toledo
 D. G. Clark.....Toledo
 Wm. W. Coldham.....Toledo
 Claude B. Cole.....Toledo
 James A. Coleman.....Toledo
 Wm. W. Conger.....Toledo
 J. L. Courtright.....Toledo
 Wm. J. Coulter.....Toledo
 Fred A. Cobb.....Toledo
 Thomas Crinnin.....Toledo
 S. S. Crumbaugh.....Toledo
 T. J. Cunningham.....Toledo
 C. W. Dahlenberg.....Toledo
 Ralph P. Daniels.....Toledo
 U. S. Grant Deaton.....Toledo
 Allen De Vilbiss.....Toledo
 Wm. G. Dice.....Toledo
 W. A. Dickey.....Toledo
 Elijah W. Doherty.....Toledo

L. Marsh Dolloway.....Toledo
 Peter Donnelly.....Toledo
 James Donnelly.....Toledo
 Chas. C. Dreyer.....Toledo
 James A. Duncan.....Toledo
 James Todd Duncan.....Toledo
 Joseph D. Ely.....Toledo
 D. Ferneau.....Toledo
 Chas. M. Fisher.....Toledo
 Albert W. Fisher.....Toledo
 Wm. H. Fisher.....Toledo
 S. D. Foster.....Toledo
 Joseph F. Fox.....Toledo
 F. M. Freeman.....Toledo
 John M. Frick.....Toledo
 J. P. Gardiner.....Toledo
 Wm. G. Gardiner, Jr.....Toledo
 W. G. Gardiner, Sr.....Toledo
 J. Gardner.....Toledo
 Wm. J. Gillette.....Toledo
 A. J. Girardot.....Toledo
 L. B. Goodyear.....Toledo
 John L. Gorny.....Toledo
 Howard L. Green.....Toledo
 Edward J. Greenfield.....Toledo
 Lawrence C. Grosh.....Toledo
 Carl B. Groschner.....Toledo
 Henry F. Hahn.....Toledo
 I. H. Hammer, Jr.....Toledo
 J. M. Harrison.....Toledo
 Chas. M. Harpster.....Toledo
 Jno. H. Harvey.....Toledo
 Oscar Hasencamp.....Toledo
 H. H. Heath.....Toledo
 G. F. Heinan.....Toledo
 Charles J. Henzler.....Toledo
 Garfield F. Henzler.....Toledo
 W. C. Hertzler.....Toledo
 C. A. Heize.....Toledo
 C. S. Hitchcock.....Toledo
 Thomas Hubbard.....Toledo
 Jesse W. Hull.....Toledo
 Ira E. Hunter.....Toledo
 D. W. Iford.....Toledo
 Carl Imoberstag.....Toledo
 Frank Jacobi.....Toledo
 Julius H. Jacobson.....Toledo
 Mark A. Jerome.....Toledo
 A. K. Jewell.....Toledo
 George H. Jones.....Toledo
 Grace Jones.....Toledo
 T. F. Keller.....Toledo
 John G. Keller.....Toledo
 Lorin E. Kerr.....Toledo
 W. H. Kirkbride.....Toledo
 Orville W. Kimbell.....Toledo
 C. C. Kirk.....Toledo
 C. A. Kirkley.....Toledo
 Frank E. Klausner.....Toledo
 H. V. I. Knisely.....Toledo
 A. Kreiger.....Toledo
 O. Landman.....Toledo
 James Laselle.....Toledo
 James T. Lawless.....Toledo
 J. T. Lawless, Jr.....Toledo
 Francis A. Leslie.....Toledo
 L. A. Levison.....Toledo
 Ross W. Loomis.....Toledo
 R. C. Longfellow.....Toledo
 George R. Love.....Toledo
 Charles Louy.....Toledo
 Charles Lukens.....Toledo
 R. Mateer.....Toledo
 H. H. McClaran.....Toledo
 M. B. McGongle.....Toledo
 Elmer I. McKesson.....Toledo
 A. F. McVety.....Toledo
 Edward Melchers.....Toledo
 Jeremiah Metzger.....Toledo
 Lewis Miller.....Toledo
 Chas. H. Mills.....Toledo
 Fred P. Minton.....Toledo
 V. O. Moore.....Toledo
 Chas. W. Moots.....Toledo
 Porter I. Mullholland.....Toledo
 J. L. Murray.....Toledo
 Park L. Myers.....Toledo
 Howard W. H. Nellis.....Toledo
 Herbert E. Noble.....Toledo
 Helen Nolan.....Toledo
 John North.....Toledo
 Clarence S. Ordway.....Toledo
 Jefferson F. Ohlinger.....Toledo
 Ben W. Patrick.....Toledo

Wm. V. Prentice.....	Toledo
Henry B. Preston.....	Toledo
C. E. Price.....	Toledo
John S. Pyle.....	Toledo
Russell H. Quick.....	Toledo
James C. Reinhardt.....	Toledo
Geo. M. Reinhardt.....	Toledo
Arthur J. Richie.....	Toledo
Wm. A. Rickard.....	Toledo
Phillip Rieg.....	Toledo
A. D. Root.....	Toledo
N. N. Sallume.....	Toledo
J. D. Salvail.....	Toledo
Otto Sasse.....	Toledo
A. E. Scheble.....	Toledo
Oscar T. Sears.....	Toledo
Clarence D. Selby.....	Toledo
A. H. Schade.....	Toledo
Wm. I. Sharpe.....	Toledo
B. C. Slocum.....	Toledo
L. F. Smead.....	Toledo
Herbert E. Smead.....	Toledo
Anna G. Smith.....	Toledo
Chas. Smith.....	Toledo
Wilber L. Smith.....	Toledo
Walter H. Snyder.....	Toledo
Chas. G. Sonders.....	Toledo
Albert L. Steinfeld.....	Toledo
Chas. A. Stephens.....	Toledo
Ralph W. Stewart.....	Toledo
Wm. D. Stewart.....	Toledo
Willard J. Stone.....	Toledo
Christian Stortz.....	Toledo
P. G. Tait.....	Toledo
Chas. F. Tenney.....	Toledo
Samuel S. Thorn.....	Toledo
Rose Timms.....	Toledo
Geo. M. Todd.....	Toledo
James L. Tracy.....	Toledo
E. D. Tucker.....	Toledo
E. C. Ueckerich.....	Toledo
Chas. V. Van Felt.....	Toledo
Chester W. Waggener.....	Toledo
Robert S. Walker.....	Toledo
Robert J. Walker.....	Toledo
James L. Watson.....	Toledo
William Wickham.....	Toledo
Arthur W. Wheeler.....	Toledo
Edwin J. Wilkinson.....	Toledo
L. A. Willoughby.....	Toledo
Dale Wilson.....	Toledo
Frank Wilson.....	Toledo
E. Woods.....	Toledo
Granville M. Wright.....	Toledo
John Wright.....	Toledo
John F. Wright.....	Toledo
Nelson H. Young.....	Toledo
Burton B. Buck.....	Toledo
D. B. Spittler.....	Waterville
Charles E. King.....	Whitehouse

MADISON COUNTY

Wm. E. Barr.....	London
Harry Christopher.....	London
Wm. H. Christopher.....	London
C. E. Gain.....	London
J. F. Kirkpatrick.....	London
J. W. Parker.....	London
W. F. Smeltzer.....	London
M. C. Sprague.....	London
A. J. Strain.....	London
M. J. Jenkins.....	Plain City
J. M. Morse.....	Plain City
A. Delaplane.....	South Solon
Fred L. Wilson.....	South Solon
Amos F. Green.....	West Jefferson
L. W. Olney.....	West Jefferson

MAHONING COUNTY

C. H. Bright.....	Petersburg
H. W. Ferry.....	Poland
R. D. Gibson.....	Youngstown
C. E. Justice.....	Poland
C. C. Stewart.....	Poland
E. A. Brownlee.....	Struthers
C. E. Spring.....	Struthers
T. J. Arundel.....	Youngstown
R. H. Barnes.....	Youngstown
Lyman H. Beers.....	Youngstown
J. H. Bennett.....	Youngstown
J. H. Bloom.....	Youngstown
H. E. Blott.....	Youngstown
C. C. Booth.....	Youngstown
W. H. Buechner.....	Youngstown

W. L. Carroll.....	Youngstown
A. M. Clark.....	Youngstown
C. R. Clark.....	Youngstown
M. S. Clark.....	Youngstown
Ida Clark.....	Youngstown
E. W. Coe.....	Youngstown
W. P. Conner.....	Youngstown
Warren D. Coy.....	Youngstown
J. A. Cross.....	Youngstown
H. C. Evans.....	Youngstown
A. E. Frye.....	Youngstown
Robert D. Gibson.....	Youngstown
W. S. Goldcamp.....	Youngstown
J. K. Hamilton.....	Youngstown
Sol Hartzell.....	Youngstown
A. S. Green.....	Youngstown
C. D. Hauser.....	Youngstown
John Heberding.....	Youngstown
H. B. Hills.....	Youngstown
M. P. Jones.....	Youngstown
Armin Lowen.....	Youngstown
John MacCurdy.....	Youngstown
S. M. McCurdy.....	Youngstown
B. B. McElhany.....	Youngstown
H. McGarvey.....	Youngstown
R. A. Mehard.....	Youngstown
F. S. Merwin.....	Youngstown
Frank S. Meyers.....	Youngstown
R. H. Montgomery.....	Youngstown
C. A. Moore.....	Youngstown
R. M. Morrison.....	Youngstown
H. M. Osborne.....	Youngstown
George L. Pearson.....	Youngstown
George S. Peck.....	Youngstown
S. R. Proudfit.....	Youngstown
W. E. Ranz.....	Youngstown
W. J. Ritchey.....	Youngstown
Ralph R. Root.....	Youngstown
W. W. Ryall.....	Youngstown
G. Scarnecchia.....	Youngstown
Silas Schiller.....	Youngstown
J. W. Shaffer.....	Youngstown
J. A. Sherbondy.....	Youngstown
T. H. Simpson.....	Youngstown
C. H. Slosson.....	Youngstown
J. B. Smith.....	Youngstown
W. H. Taylor.....	Youngstown
H. H. Thels.....	Youngstown
J. J. Thomas.....	Youngstown
E. A. Tobey.....	Youngstown
J. A. Veach.....	Youngstown
Harry E. Welch.....	Youngstown
R. E. Whelan.....	Youngstown
B. W. Wilson.....	Youngstown
H. W. Weinberg.....	Youngstown
John Zimmerman.....	Youngstown
H. A. Zimmerman.....	Youngstown

MARION COUNTY

J. E. Baker.....	Marion
E. E. Matthews.....	Marion
Curtis L. Baker.....	Marion
John W. Adair.....	Marion
Samuel H. Britton.....	Marion
Maul Bull.....	Marion
Eliz C. Cheatham.....	Marion
A. M. Crane.....	Marion
Louis D. Hamilton.....	Marion
J. M. Hoskins.....	Marion
Robert C. M. Lewis.....	Marion
H. J. Lower.....	Marion
Sheridan W. Mattox.....	Marion
J. A. McMurray.....	Marion
M. C. McKibben.....	Marion
M. B. Newhouse.....	Marion
Robert Ramroth.....	Marion
Elmer O. Richardson.....	Marion
Auguste Rhu.....	Marion
H. S. Rhu.....	Marion
Chas. E. Sawyer.....	Marion
C. W. Sawyer.....	Marion
N. F. Tilton.....	Marion
H. L. Uhler.....	Marion
Dana O. Weeks.....	Marion
Fillmore Young.....	Marion
Chas. W. Jacoby.....	Morrill
J. W. Jolley.....	Morrill
R. S. Dombaugh.....	Waldo
Ben D. Osborn.....	Waldo

MEIGS COUNTY

W. H. Beary.....	Middleport
Austin Edwards.....	Middleport
D. B. Hartinger.....	Middleport

D. S. Hartinger.....Middleport
 A. A. Hugg.....Middleport
 David Sisson.....Middleport
 Lewis A. Thomas.....Middleport
 T. R. Weed.....Middleport
 Byron Bing.....Pomeroy
 J. N. Gilliford.....Pomeroy
 W. S. Hart.....Pomeroy
 Josiah W. Hoff.....Pomeroy
 James A. Miller.....Pomeroy
 Lafayette Roush.....Pomeroy
 John Philson.....Racine
 C. W. Petty.....Hartford City, W. Va.

MERCER COUNTY

Frank E. Ayers.....Celina
 L. D. Brumm.....Celina
 M. B. Fishbaugh.....Celina
 J. E. Hattery.....Celina
 D. H. Richardson.....Celina
 Joseph Sager.....Celina
 Fred Brumm.....Coldwater
 D. H. Richardson.....Fort Recovery
 Martyn Taylor.....Fort Recovery
 W. R. Taylor.....Fort Recovery
 P. T. Waters.....Rockford
 J. J. Morry.....St. Henry

MIAMI COUNTY

Van S. Deaton.....Alcony
 C. W. Bausman.....Bradford
 J. M. Saylor.....Christiansburg
 Jacob Kendall.....Covington
 H. W. Kendall.....Covington
 Lee A. Rhul.....Covington
 J. R. Echelbarger.....Fletcher
 I. C. Kiser.....Fletcher
 L. S. Hoover.....Laura
 H. B. Denman.....Lena
 W. E. Durr.....Ludlow Falls
 John Baker.....Piqua
 J. B. Barker.....Piqua
 R. D. Burnham.....Piqua
 J. R. Caywood.....Piqua
 A. B. Frame.....Piqua
 W. J. Kelly.....Piqua
 F. E. Kitzmiller.....Piqua
 Robert Kunkle.....Piqua
 J. H. Lowe.....Piqua
 Ada L. Malick.....Piqua
 J. E. Murray.....Piqua
 R. M. O'Ferrall.....Piqua
 L. E. Reck.....Piqua
 W. J. Prince.....Piqua
 J. H. Prince.....Piqua
 R. M. Shannon.....Piqua
 W. N. Unkefer.....Piqua
 S. N. Bausman.....Pleasant Hill
 A. J. Bausman.....Pleasant Hill
 Judson Teeter.....Pleasant Hill
 S. D. Hartman.....Tippecanoe City
 H. H. Havens.....Tippecanoe City
 B. J. Kendall.....Tippecanoe City
 Warren Coleman.....Troy
 C. A. Hartley.....Troy
 G. E. McCullough.....Troy
 H. E. Shilling.....Troy
 J. S. Shinn.....Troy
 W. R. Thompson.....Troy
 T. M. Wright.....Troy
 T. M. Wright, Jr.....Troy
 C. R. Coate.....West Milton
 Gustave C. Ullery.....West Milton
 W. E. Hogan.....West Milton
 Gainor Jennings.....West Milton
 H. R. Pearson.....West Milton
 E. W. Spittler.....West Milton

MONROE COUNTY

D. W. Lowe.....Antioch
 W. G. Webb.....Cameron
 H. M. Smith.....Clarington
 C. E. Baker.....Genoa
 Allen F. Latta.....Graysville
 T. W. McKelvey.....Hannibal
 G. W. Stewart.....Jerusalem
 J. G. Lapp.....Laings
 L. F. Deihl.....Lewisville
 J. W. Webber.....Lewisville
 N. P. Buskirk.....Round Bottom
 S. C. Griffith.....Sardis
 J. W. Whitsett.....Sardis
 F. W. Murrey.....Stafford
 F. C. Huth.....Woodsfield
 J. M. Keysor.....Woodsfield

A. H. Korner.....Woodsfield
 J. W. Norris.....Woodsfield
 J. R. Parry.....Woodsfield

MONTGOMERY COUNTY

J. L. Carter.....Carrolltown
 G. T. Brown.....Centerville
 B. W. D. Keever.....Centerville
 C. D. Slagle.....Centerville
 H. E. Gardiner.....Clayton
 J. H. Pumphrey.....Clayton
 H. C. Mundhenk.....Brookville
 Wm. Agnew.....Dayton
 H. B. Alexander.....Dayton
 W. E. Allaman.....Dayton
 Erl Baber.....Dayton
 F. D. Barker.....Dayton
 S. M. Beck.....Dayton
 J. S. Beck.....Dayton
 G. W. Beeghly.....Dayton
 E. E. Bohlender.....Dayton
 Horace Bonner.....Dayton
 L. G. Bowers.....Dayton
 E. S. Breese.....Dayton
 C. H. Breidenbach.....Dayton
 S. A. Broughman.....Dayton
 R. A. Bunn.....Dayton
 Mary E. Cadwallader.....Dayton
 C. N. Chrisman.....Dayton
 W. C. Clagett.....Dayton
 D. B. Conklin.....Dayton
 W. J. Conklin.....Dayton
 M. E. Coy.....Dayton
 L. H. Cox.....Dayton
 Frank D. Crowl.....Dayton
 Geo. P. Dale.....Dayton
 E. C. Davison.....Dayton
 G. W. Davis.....R. F. D. No. 8
 J. A. Davison.....Dayton
 W. H. Delscamp.....Dayton
 J. F. Dolina.....Dayton
 M. W. Duckwall.....Dayton
 F. A. Duckwall.....Dayton
 A. H. Dunham.....Dayton
 G. B. Evans.....Dayton
 Eleanora Everhard.....Dayton
 W. A. Ewing.....Dayton
 J. H. Farber.....Dayton
 Gertrude Felker.....Dayton
 Frank Fife.....Dayton
 M. B. Floyd.....Dayton
 R. S. Gaugler.....Dayton
 J. C. George.....Dayton
 G. D. Gohn.....Dayton
 H. Good.....Dayton
 N. D. Goodhue.....Dayton
 Geo. Goodhue.....Dayton
 F. C. Gray.....Dayton
 O. W. Greene.....Dayton
 O. E. Griep.....Dayton
 P. L. Gunkel.....Dayton
 H. A. Hahne.....Dayton
 H. C. Haning.....Dayton
 H. B. Harris.....Dayton
 H. H. Hatcher.....Dayton
 S. E. Hendren.....Dayton
 N. M. Hendricks.....Dayton
 F. R. Henry.....Dayton
 G. A. Hochwalt.....Dayton
 J. A. Hodkins.....Dayton
 G. W. Hous.....Dayton
 J. M. Howell.....Dayton
 O. V. Huffman.....Dayton
 C. H. Humphreys.....Dayton
 E. M. Huston.....Dayton
 H. S. Jewett.....Dayton
 Lynn Jones.....Dayton
 E. E. Kimmell.....Dayton
 C. W. King.....Dayton
 L. Kleppinger.....Dayton
 J. D. Kramer.....Dayton
 A. H. Lane.....Dayton
 Wm. F. Lauterbach.....Dayton
 D. C. Lichliter.....Dayton
 A. L. Light.....Dayton
 Hugo Maeth.....Dayton
 E. H. Mallow.....Dayton
 E. B. Markey.....Dayton
 W. C. Marshall.....Dayton
 J. H. McCassey.....Dayton
 Charles MacGregor.....Dayton
 J. W. McKemy.....Dayton
 C. C. McLean.....Dayton
 J. W. Millette.....Dayton

D. E. Miller.....	Dayton
A. R. Moist.....	Dayton
A. J. Moorman.....	Dayton
E. H. Morris.....	Dayton
C. L. Patterson.....	Dayton
R. C. Pennywitt.....	Dayton
O. A. Peters.....	Dayton
Wm. Plattfaut.....	Dayton
Mathew Porter.....	Dayton
W. F. Prather.....	Dayton
Chas. F. Powell.....	Dayton
J. M. Ratliff.....	Dayton
D. G. Reilley.....	Dayton
H. D. Reinhart.....	Dayton
J. C. Reeve.....	Dayton
C. G. Rogers.....	Dayton
W. O. Roop.....	Dayton
F. W. Roush.....	Dayton
M. Ryan.....	Dayton
W. A. Ryan.....	Dayton
C. W. Salisbury.....	Dayton
J. B. Sampsell.....	Dayton
D. Scheibenzuber.....	Dayton
G. R. Schuster.....	Dayton
A. F. Shepherd.....	Dayton
A. J. Slaven.....	Dayton
Webster S. Smith.....	Dayton
C. D. Smith.....	Dayton
G. S. Staub.....	Dayton
J. J. Stout.....	Dayton
P. W. Tappen.....	Dayton
C. H. Tate.....	Dayton
F. S. Thompson.....	Dayton
H. Thorne.....	Dayton
B. C. West.....	Dayton
J. M. Weaver.....	Dayton
F. C. Weaver.....	Dayton
S. Souders.....	Dean
S. A. Stout.....	Dean
G. C. Henkel.....	Farmersville
J. A. Brown.....	Germantown
N. W. Cowden.....	Germantown
T. H. Dickinson.....	Germantown
J. L. Travis.....	Germantown
W. S. Bookwalter.....	Miamisburg
E. R. Crew.....	Miamisburg
C. J. Hunt.....	Miamisburg
C. S. Judy.....	Miamisburg
Orville McCray.....	Miamisburg
B. W. Weaver.....	Miamisburg
W. P. Weaver.....	Miamisburg
D. C. Mills.....	New Lebanon
G. T. Brown.....	Phillipsburg
W. C. Mendenhall.....	Trotwood
R. R. Shank.....	Trotwood
F. W. Smith.....	Union
J. M. Deam.....	Vandalia
W. H. Riley.....	Vandalia

MORGAN COUNTY

F. W. Jewett.....	Beckett
Lee Humphrey.....	Malta
Peter Foulk.....	Deavertown
J. B. Naylor.....	Malta
T. J. Bingham.....	McConnellsville
J. E. Brown.....	McConnellsville
J. F. Leeper.....	McConnellsville
W. C. Leeper.....	McConnellsville
W. D. Mercer.....	McConnellsville
J. E. Campbell.....	Pennsville
James Davis.....	Ringold
L. P. Culver.....	Reinersville
L. L. Imes.....	Rosseau
E. D. Rex.....	Woodgrove

MORROW COUNTY

Frank F. Barger.....	Cardington
Henry S. Green.....	Cardington
Chas. H. Neal.....	Cardington
John H. Jackson.....	Edison
E. C. Sherman.....	Fulton
Delphos B. Virtue.....	Iberia
Fred E. Thompson.....	Marengo
Walter C. Bennett.....	Mt. Gilead
Wm. L. Case.....	Mt. Gilead
Roy L. Pierce.....	Mt. Gilead
Roland C. Spear.....	Mt. Gilead

MUSKINGUM COUNTY

W. E. Elder.....	Chandlersville
Edward Cass.....	Dresden
J. F. Iden.....	Dresden
Granville B. Trout.....	Duncan Falls

J. D. Fleming.....	Fazeysburg
Chas. Z. Axline.....	Fultonham
F. W. Watkins.....	Fultonham
J. H. Bain.....	New Concord
H. F. Lorimer.....	New Concord
E. C. Ledman.....	Norwich
J. L. Geyer.....	Norwich
G. L. Kennedy.....	Roseville
Chas. E. Monfort.....	Roseville
W. A. Stoneburner.....	Roseville
Geo. W. W. Walker.....	Roseville
C. A. Dunn.....	Stovertown
A. W. Squires.....	White Cottage
Stanley L. Allen.....	Zanesville
R. B. Bainter.....	Zanesville
F. S. Baron.....	Zanesville
W. C. Bateman.....	Zanesville
E. C. Brush.....	Zanesville
E. R. Brush.....	Zanesville
J. C. Crossland.....	Zanesville
L. R. Culbertson.....	Zanesville
J. T. Davis.....	Zanesville
C. E. Drake.....	Zanesville
D. J. Evans.....	Zanesville
John M. Fassig.....	Zanesville
H. R. Geyer.....	Zanesville
Abraham H. Gorrell.....	Zanesville
Chas. U. Hanna.....	Zanesville
J. Z. Heston.....	Zanesville
Chas. H. Higgins.....	Zanesville
Anna M. Hill.....	Zanesville
J. G. Holstein Jr.....	Zanesville
J. G. Holstein Sr.....	Zanesville
J. H. Infield.....	Zanesville
Simeon Kelly.....	Zanesville
Wm. C. Klemm.....	Zanesville
Chas. C. Knapp.....	Zanesville
Chas. M. Lenhart.....	Zanesville
E. C. Logsdon.....	Zanesville
D. J. Mathews.....	Zanesville
G. W. McCormick.....	Zanesville
J. R. McDowell.....	Zanesville
Wm. A. Melick.....	Zanesville
Cyrus M. Rambo.....	Zanesville
Wm. F. Sealover.....	Zanesville
C. P. Sellers.....	Zanesville
H. T. Sutton.....	Zanesville
R. D. Sykes.....	Zanesville
A. M. Templeton.....	Zanesville
A. E. Walters.....	Zanesville
G. Warburton.....	Zanesville
Wm. C. Waters.....	Zanesville
O. M. Wiseman.....	Zanesville

NOBLE COUNTY

Chas. A. Craig.....	Ava
F. R. Dew.....	Belle Valley
G. G. Mallett.....	Bern
John G. Albers.....	Caldwell
E. C. Culbertson.....	Caldwell
J. Finley.....	Caldwell
John L. Gray.....	Caldwell
F. O. Neptune.....	Caldwell
C. P. Simons.....	Caldwell
W. S. Williams.....	Caldwell
J. S. Teeters.....	Harriettsville
M. S. Lawrence.....	Sarahsville
A. A. Staats.....	Summerfield
J. H. Williams.....	Summerfield

OTTAWA COUNTY

Fred Ingraham.....	Curtis
Stuart T. Dromgold.....	Elmore
J. C. Bowman.....	Genoa
E. F. Shaffer.....	Lakeside
A. L. Bowman.....	Martin
Fred S. Heller.....	Oak Harbor
Emery Huyck.....	Oak Harbor
Henry Laughholz.....	Oak Harbor
Henry J. Pool.....	Port Clinton
Parker B. Robinson.....	Put-in-Bay
David Barringer.....	Rocky Ridge

PAULDING COUNTY

Giles M. Brattain.....	Antwerp
Horace E. Deemer.....	Antwerp
Ernest D. Murphy.....	Antwerp
Seth Demuth.....	Cecil
T. P. Fast.....	Grover Hill
J. R. Heath.....	Grover Hill
A. H. Mouser.....	Latty
Chas. E. Burgette.....	Melrose
H. K. Mouser.....	Oakwood

A. C. Sherrard.....Oakwood
R. J. Dillery.....Paulding
Leroy R. Fast.....Paulding
C. E. Houston.....Paulding
John W. Cartwright.....Payne
E. W. Gubbs.....Payne

PERRY COUNTY

C. E. Bradshaw.....Corning
C. B. Holcomb.....Corning
James Miller.....Corning
Geo. L. Saunders.....Corning
J. M. Dennison.....Crooksville
W. P. Dupler.....Crooksville
Robert W. Miller.....Hemlock
F. J. Crosbie.....Junction City
W. F. Stoneburner.....Moxahala
A. D. S. McArthur.....New Lexington
J. G. McDougall.....New Lexington
N. T. McTeague.....New Lexington
J. H. Wright.....New Lexington
B. E. Winters.....New Straitsville
M. O. Smith.....Portersville
F. A. Axline.....Salttillo
J. D. Axline.....Shawnee
Lewis Clous.....Somerset
M. Clouse.....Somerset
J. C. Fountain.....Somerset
O. L. Iden.....Somerset

PICKAWAY COUNTY

Geo. R. Gardner.....Asheville
R. A. Postle.....Asheville
Charles Stewart.....Asheville
H. C. Allen.....Circleville
B. R. Bales.....Circleville
T. B. Blackstone.....Circleville
G. H. Colvill.....Circleville
D. V. Courtright.....Circleville
O. H. Dunton.....Circleville
G. W. Heffner.....Circleville
A. W. Holman.....Circleville
Howard Jones.....Circleville
Geo. G. Leist.....Circleville
George T. Row.....Circleville
R. A. Brown.....Commercial Point
R. A. Brown.....Commercial Point
F. E. Ginder.....Darbyville
J. B. Justice.....Darbyville
A. L. Stump.....Derby
Chas. Davis.....New Holland
J. B. May.....New Holland
J. A. Knight.....Orient
J. W. House.....Tarleton
S. J. Irwin.....Tarleton
C. B. Briner.....Williamsport
D. H. Marcy.....Williamsport
C. R. McConnell.....Williamsport

PIKE COUNTY

A. L. McAllister.....Beaver
J. L. McAllister.....Beaver
J. W. Little.....Cynthiana
C. H. Willson.....Idaho
Leonard McPherson.....Jasper
J. B. Ray.....Omega
L. E. Wills.....Omega
E. W. Cornetet.....Piketon
J. R. Hilling.....Piketon
W. R. Hurst.....Piketon
I. P. Seiler.....Piketon
E. W. Dixon.....Stockdale
E. W. Tidd.....Stockdale
O. C. Andre.....Waverly
J. L. Caldwell.....Waverly
P. T. Leighley.....Waverly
Geo. B. Nye.....Waverly

PORTAGE COUNTY

C. W. Cummings.....Atwater
W. J. Thomas.....Diamond
G. R. French.....Garrettsville
O. T. Manley.....Garrettsville
A. Tidball.....Garrettsville
H. C. Hurd.....Hiram
F. H. Hurd.....Hiram
W. B. Andrews.....Kent
B. H. Jacob.....Kent
J. H. Krape.....Kent
E. W. Price.....Kent
E. J. Widdecombe.....Kent
E. H. Knowlton.....Mantua

S. Barrett.....Randolph
A. J. Bietz.....Ravenna
C. O. Jaster.....Ravenna
M. G. McBride.....Ravenna
B. H. Nichols.....Ravenna
L. W. Pritchard.....Ravenna
W. G. Smith.....Ravenna
G. J. Waggoner.....Ravenna
W. W. White.....Ravenna
L. A. Woolf.....Ravenna
E. B. Dyson.....Rootstown
A. M. Powers.....Rootstown
B. T. Keller.....Streetsboro
W. E. Fulton.....Suffield

PREBLE COUNTY

J. W. Coombs.....Camden
D. W. McQueen.....Camden
Frank M. Michael.....Eaton
J. C. Ryder.....Eaton
H. H. Emerson.....Gratis
P. S. Saylor.....Gratis
W. G. Brown.....Lewisburg
E. E. Bevington.....New Paris
C. A. Hawley.....New Paris
W. I. Christian.....Verona
L. R. Mundhenk.....West Alexandria
Alex C. Hunter.....West Alexandria

PUTNAM COUNTY

E. A. Ballmer.....Columbus Grove
W. H. Beggs.....Columbus Grove
G. S. Wilcox.....Columbus Grove
C. W. Bird.....Continental
E. E. Watterson.....Continental
E. H. Bird.....Dupont
J. F. George.....Ft. Jennings
C. F. Douglass.....Kalida
J. C. McClung.....Leipsic
E. L. Deuble.....Miller City
C. E. Beardsley.....Ottawa
Frank Light.....Ottawa
W. C. Miller.....Ottawa
A. L. Paul.....Ottawa
W. F. Reed.....Ottawa
Albert Sheibley.....Ottawa
P. A. Bixel.....Pandora
E. P. Lemley.....Vaughansville

RICHLAND COUNTY

H. H. Smith.....Lexington
J. M. Heyde.....Lucas
E. W. Heyde.....Lucas
Martin G. Atkinson.....Mansfield
Geo. W. Baughman.....Mansfield
Wm. Bushnell.....Mansfield
Chas. G. Brown.....Mansfield
John M. Burns.....Mansfield
J. H. Craig.....Mansfield
Maxwell J. Davis.....Mansfield
Samuel Findley.....Mansfield
J. M. Garber.....Mansfield
M. A. Golden.....Mansfield
G. T. Goodman.....Mansfield
Ben F. Harding.....Mansfield
Wm. E. Loughridge.....Mansfield
John Maglott.....Mansfield
Adam H. McCullough.....Mansfield
Lillian J. McBride.....Mansfield
Wm. S. Mecklem.....Mansfield
Geo. W. Miller.....Mansfield
Cary G. Parker.....Mansfield
David W. Peppard.....Mansfield
Edward Remy Jr.....Mansfield
J. W. Russell.....Bellville
John L. Stevens.....Mansfield
Harry Woltman.....Mansfield
Jacob A. Yoder.....Mansfield
I. H. Lebarre.....Ravonia
C. S. Walker.....Plymouth
A. F. Hyde.....Shelby
J. A. Koehler.....Shelby
Archibald Saunders.....Shiloh

ROSS COUNTY

R. H. McKee.....Bainbridge
J. H. Pake.....Bainbridge
R. E. Bower.....Chillicothe
Edwin W. Breyfogle.....Chillicothe
Henry R. Brown.....Chillicothe
Wm. L. Counts.....Chillicothe
Joseph M. Hanley.....Chillicothe

Ralph W. Holmes.....	Chillicothe
C. D. Leggett.....	Chillicothe
H. H. Marsh.....	Chillicothe
Frank T. Marr.....	Chillicothe
John W. Maxwell.....	Chillicothe
Edward Meggenhoffen.....	Chillicothe
Chas. Miesse.....	Chillicothe
A. E. Merkle.....	Chillicothe
A. A. Perrin.....	Chillicothe
L. D. Rickey.....	Chillicothe
Josephine Riley.....	Chillicothe
G. E. Robbins.....	Chillicothe
Jefferson Searce.....	Chillicothe
Walter S. Scott.....	Chillicothe
W. H. Silbaugh.....	Chillicothe
Oliver P. Tatman.....	Chillicothe
B. Hughey.....	Frankfort
L. M. Tinker.....	Frankfort
James S. Wiltshire.....	Gillespieville
C. C. Hatfield.....	Kingston
S. C. Lightner.....	Kingston
Jas. T. Growden.....	Waller
J. W. Wills.....	Richmondale
J. M. Wiltshire.....	Richmondale
W. S. Schurlack.....	Vigo

SANDUSKY COUNTY

I. I. Good.....	Bellevue
C. L. Harding.....	Bellevue
J. C. Morrow.....	Bellevue
J. B. Talmadge.....	Clyde
W. R. Deemer.....	Fremont
E. M. Ickes.....	Fremont
B. O. Kreilich.....	Fremont
S. McKenny.....	Fremont
M. O. Phillips.....	Fremont
C. R. Pontius.....	Fremont
C. F. Reiff.....	Fremont
S. C. Sackett.....	Fremont
E. L. Smith.....	Fremont
M. Stamm.....	Fremont
Jas. Stewart.....	Fremont
O. L. Steirwalt.....	Fremont
O. H. Thomas.....	Fremont
E. L. Vermilya.....	Fremont
O. E. Vermilya.....	Fremont
N. B. Ervin.....	Gibsonburg
A. G. Eyestone.....	Gibsonburg
R. D. Reynolds.....	Greenspring
F. A. Dillman.....	Helena
W. E. Higbee.....	Lindsay
J. H. Bowman.....	Vickery
D. W. Philo.....	Woodville

SCIOTO COUNTY

Jas. S. Frizell.....	Buena Vista
Geo. W. Osborne.....	Dry Run
David N. Hopkins.....	Friendship
Lucien G. Locke.....	Haverhill
John B. Warwick.....	Lucasville
L. D. Allard.....	Portsmouth
Daniel A. Berndt.....	Portsmouth
Clara E. Cook.....	Portsmouth
Wesley G. Chaney.....	Portsmouth
S. P. Fetter.....	Portsmouth
Jas. W. Fitch.....	Portsmouth
Margaret C. Fulton.....	Portsmouth
Wm. E. Gault.....	Portsmouth
Steven S. Halderman.....	Portsmouth
J. D. Hendrickson.....	Portsmouth
James D. Jordan.....	Portsmouth
Peter J. Kline.....	Portsmouth
Chas. F. Kline.....	Portsmouth
O. O. LeBaron.....	Portsmouth
L. G. Locke.....	Portsmouth
Geo. M. Marshall.....	Portsmouth
Edgar O. McCall.....	Portsmouth
Sample B. McKerrinn.....	Portsmouth
Wm. D. Mecklethwait.....	Portsmouth
O. R. Miclthwaite.....	Portsmouth
Arthur R. Moore.....	Portsmouth
John M. Obrist.....	Portsmouth
Joseph S. Rardin.....	Portsmouth
Orin W. Robe.....	Portsmouth
Howard C. Sellards.....	Portsmouth
Harry A. Schirman.....	Portsmouth
Wm. W. Smith.....	Portsmouth
Albert L. Test.....	Portsmouth
C. W. Wendelken.....	Portsmouth
Frank H. Williams.....	Portsmouth
G. W. Chabot.....	Powellsville
H. F. Clark.....	Rarden
James B. Ray.....	Scioto

J. W. Hutchens.....	Sciotoville
Geo. B. Andre.....	South Webster

SENECA COUNTY

Amos Knight.....	Attica
Chas. M. Comer.....	Bascom
Martin Wilson.....	Bettsville
Dorsey S. Fellars.....	Bloomville
Chalmer N. Hatfield.....	Fostoria
Chas. A. Henry Jr.....	Fostoria
George L. Hoege.....	Fostoria
Wm. Leonard.....	Fostoria
N. C. Miller.....	Fostoria
J. H. Norris.....	Fostoria
Earl L. Overholt.....	Fostoria
John H. Thompson.....	Greensprings
Winfield S. Mumaw.....	Kansas
Robert G. Steele.....	Melmore
Chas. I. Anders.....	Old Fort
N. Storer.....	Republic
Wm. H. Benner.....	Tiffin
Chas. T. Benner.....	Tiffin
Proctor E. Benner.....	Tiffin
Wade K. Chamberlain.....	Tiffin
Robert C. Chamberlain.....	Tiffin
C. F. Daniel.....	Tiffin
Harmon B. Gibbon.....	Tiffin
J. A. Gosling.....	Tiffin
Ralph R. Hendershott.....	Tiffin
J. D. Howe.....	Tiffin
Maurice Leahy.....	Tiffin
B. W. Mercer.....	Tiffin
Edward H. Porter.....	Tiffin
Marion Uberroth.....	Tiffin
Harry L. Wenner.....	Tiffin
Geo. W. Willard.....	Tiffin
Geo. P. Willard.....	Tiffin

SHELBY COUNTY

G. E. Martin.....	Anna
D. R. Millette.....	Anna
Wm. Gaines.....	Houston
S. G. Martt.....	Houston
Ord O. Le Master.....	Kettleville
T. W. Ratterman.....	Loramie
O. C. Wilson.....	Maplewood
Chas. M. Faulkner.....	Montra
J. W. Costollo.....	Sidney
Jas. D. Geyer.....	Sidney
Alvah W. Grosvenor.....	Sidney
A. B. Gudenkauff.....	Sidney
Chas. A. Harmon.....	R. F. D. Sidney
Flint L. Hubble.....	Sidney
Millard F. Hussey.....	Sidney
Cyrus Johnston.....	Sidney
L. C. Pepper.....	Sidney
Ben M. Sharp.....	Sidney
D. R. Silver.....	Sidney
E. A. Yates.....	Sidney

STARK COUNTY

B. C. Barnard.....	Alliance
Chas. Hoover.....	Alliance
Collins M. Hoover.....	Alliance
Geo. L. King.....	Alliance
Perry F. King.....	Alliance
Charles H. Ross.....	Alliance
Walter C. Taylor.....	Alliance
H. C. Temple.....	Alliance
James C. Temple.....	Alliance
John K. Tressell.....	Alliance
Hiram Dissinger.....	Canal Fulton
Dallas K. Jones.....	Canal Fulton
David F. Banker.....	Canton
A. C. Brant.....	Canton
E. C. Brant.....	Canton
H. H. Bowman.....	Canton
Franklin P. Calhoun.....	Canton
Chas. A. Crane.....	Canton
John P. De Witt.....	Canton
Clarence Exline.....	Canton
Henry W. Faulk.....	Canton
B. J. Ferciot.....	Canton
Lauren E. Flickinger.....	Canton
Wallace S. Foulks.....	Canton
M. C. Foulks.....	Canton
James Fraunfelter.....	Canton
Clare Fraunfelter.....	Canton
Frank W. Gavin.....	Canton
Grover C. Gony.....	Canton
Frank E. Hall.....	Canton
Arthur J. Hill.....	Canton
John F. Hudson.....	Canton
Frank J. Hahler.....	Canton
Geo. A. Kelley.....	Canton

T. J. Landor.....	Canton	C. M. Humphrey.....	Akron
J. G. Lawrence.....	Canton	M. L. Hunt.....	Akron
Edgar J. March.....	Canton	H. H. Jacobs.....	Akron
Harry A. March.....	Canton	A. W. Jones.....	Akron
Jacob Marchand.....	Canton	R. C. Kendig.....	Akron
Edward O. Morrow.....	Canton	A. A. Kohler.....	Akron
Edward P. Morrow.....	Canton	W. W. Leonard.....	Akron
John F. O'Brien.....	Canton	J. L. Lee.....	Akron
Harry P. Pomerene.....	Canton	G. M. Logan.....	Akron
Maria G. Pontius.....	Canton	E. L. Mather.....	Akron
Odo E. Portman.....	Canton	D. M. McDonald.....	Akron
Joseph L. Reed.....	Canton	J. N. McMaster.....	Akron
J. H. Sanor.....	Canton	S. E. McMaster.....	Akron
Edward S. Schild.....	Canton	R. H. McKay.....	Akron
C. E. Schilling.....	Canton	C. W. Millkin.....	Akron
Harry M. Schuffell.....	Canton	D. H. Morgan.....	Akron
John E. Shorb.....	Canton	T. K. Moore.....	Akron
Thurman Siffert.....	Canton	S. I. Morgenroth.....	Akron
Leander Stoner.....	Canton	C. E. Norris.....	Akron
Esther Tyrell.....	Canton	Thos. C. Parks.....	Akron
Alonzo B. Walker.....	Canton	Wm. Parks.....	Akron
W. H. Weaver.....	Canton	Josiah Pumphrey.....	Akron
Geo. F. Zinninger.....	Canton	Jas. C. Rabe.....	Akron
Frank Kuntz.....	E. Greenville	G. T. Rankin.....	Akron
Frank D. Smith.....	Hartsville	I. C. Rankin.....	Akron
Milton M. Bauer.....	Lake	F. C. Read.....	Akron
Jas. F. Wilson.....	Limaville	Albert Rowland.....	Akron
Clarence G. Hamilton.....	Louisville	F. P. Russell.....	Akron
Chas. A. Ruffin.....	Louisville	W. A. Sackett.....	Akron
Chauncey A. Walker.....	Louisville	J. H. Seiler.....	Akron
Frank Pennock.....	Marlboro	Jas. L. Shirey.....	Akron
Leon B. Santee.....	Marlboro	John C. Shuman.....	Akron
Vallay I. Adair.....	Massillon	A. Sicherman.....	Akron
Samuel Barnes.....	Massillon	A. F. Sippy.....	Akron
John F. Campbell.....	Massillon	M. D. Stevenson.....	Akron
Neal W. Culbertson.....	Massillon	G. W. Stauffer.....	Akron
R. W. Dickey.....	Massillon	L. S. Sweitzer.....	Akron
Henry E. Eyman.....	Massillon	H. D. Taggard.....	Akron
Jas. F. Gardner.....	Massillon	G. A. Theiss.....	Akron
Daniel S. Gardner.....	Massillon	H. S. Todd.....	Akron
Jesse O. Gardner.....	Massillon	H. C. Theiss.....	Akron
Geo. F. Garmier.....	Massillon	E. S. Underwood.....	Akron
Seth Hattery.....	Massillon	Lucien Waldron.....	Akron
Irene Hardy.....	Massillon	E. M. Weaver.....	Akron
J. D. Holsten.....	Massillon	John H. Weber.....	Akron
T. Clark Miller.....	Massillon	J. H. Weller.....	Akron
John D. O'Brien.....	Massillon	E. A. Weeks.....	Akron
Resin J. Pumphrey.....	Massillon	Louis J. Wise.....	Akron
T. J. Reed.....	Massillon	T. W. Workman.....	Akron
Maurice S. Smith.....	Massillon	S. J. Wright.....	Akron
Cullen P. Wolf.....	Massillon	G. A. Brown.....	Barberton
Logan B. Zintsmaster.....	Massillon	G. E. Gardner.....	Barberton
Harvey E. Corl.....	Middlebranch	Frederick Lahmers.....	Barberton
Geo. Y. Davis.....	Minerva	Bert Rodenbaugh.....	Barberton
Arthur Thomas.....	Minerva	N. F. Rodenbaugh.....	Barberton
Geo. M. Campbell.....	Navarre	A. H. Stall.....	Barberton
Sylvester Shelter.....	Navarre	A. S. Baird.....	Bath
J. B. Daugherty.....	New Berlin	Homer G. Long.....	Copley
Wm. C. Steele.....	New Berlin	H. I. Cozad.....	Cuyahoga Falls
Wm. H. Becher.....	N. Industry	W. S. Hough.....	Cuyahoga Falls
J. G. Lawrence.....	N. Lawrence	K. R. Moses.....	Cuyahoga Falls
Albert E. Williams.....	N. Lawrence	W. A. Searles.....	Cuyahoga Falls
Wm. B. Davis.....	Osnaburg	R. A. Smith.....	Ghent
Louis A. Buchman.....	Pierce	B. T. Keller.....	Hudson
Chas. H. Goodrich.....	Sandyville	Geo. M. Frost.....	Hudson
Oglivia C. Richsecker.....	Wilnot	G. L. Starr.....	Hudson

SUMMIT COUNTY

Francis Adams.....	Akron
E. W. Barton.....	Akron
William Beidler.....	Akron
D. S. Bowman.....	Akron
J. P. Boyd.....	Akron
Wm. S. Chase.....	Akron
J. V. Cleaver.....	Akron
H. T. Davidson.....	Akron
L. R. C. Eberhard.....	Akron
L. S. Ebright.....	Akron
Wm. J. Emery.....	Akron
F. A. Ewers.....	Akron
Peter Fehr.....	Akron
A. E. Foltz.....	Akron
E. B. Foltz.....	Akron
A. K. Fowser.....	Akron
J. G. Grant.....	Akron
M. V. Halter.....	Akron
J. W. Hassenfue.....	Akron
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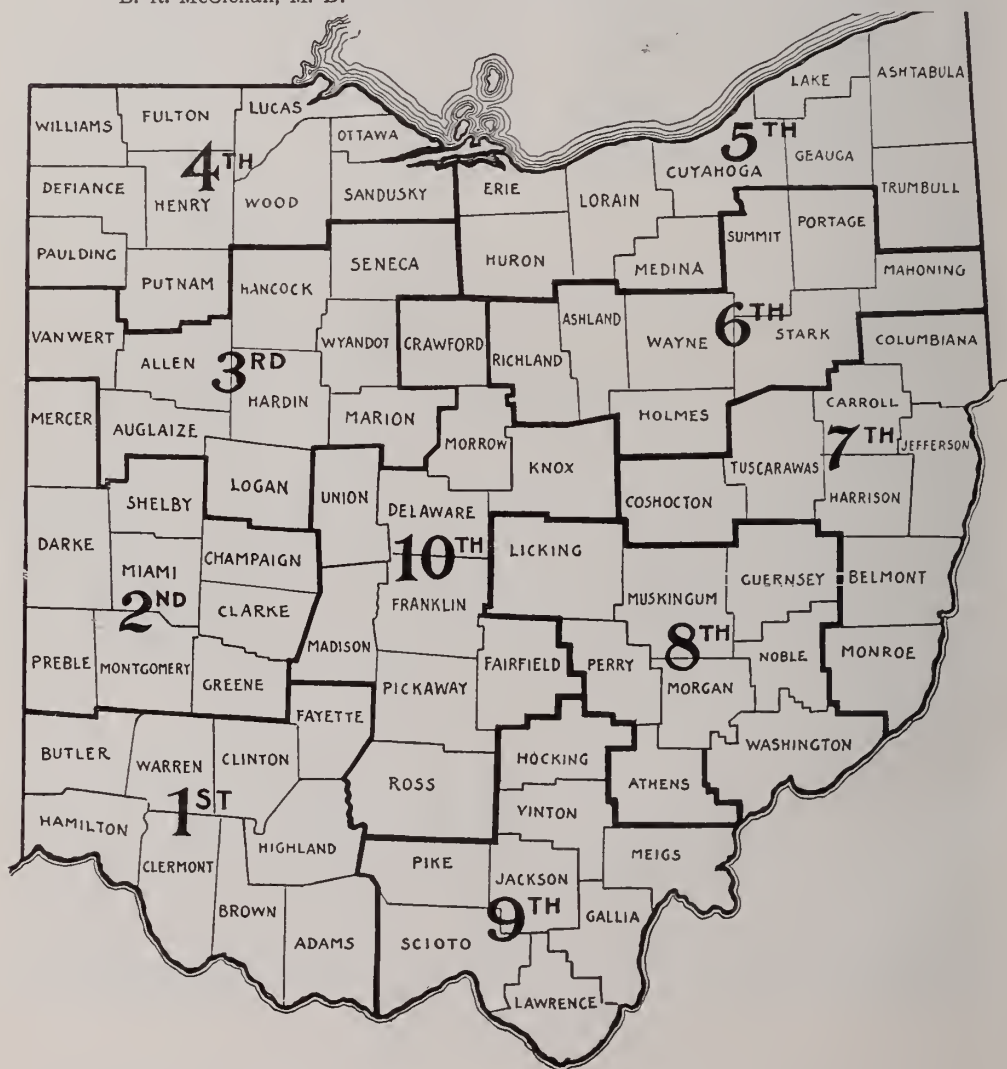
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Adams	F. C. Crawford, Dunkinsville..	O. T. Sproull, West Union.....	
Brown	A. W. Francis, Ripley.....	A. W. Mitchell, Georgetown....	4th Wednesday in Feb., May, August and Nov.
Butler	H. L. Burdsall, Hamilton.....	Henry Krone, Hamilton.....	2d Tuesday, monthly
Clermont	F. P. Witham, Withamsville...	D. M. Roberts, New Richmond.	
Clinton	F. O. Wright, Wilmington.....	Frank A. Peelle, Wilmington....	Last Thursday, monthly
Fayette	W. E. Ireland, Moons.....	L. W. Plne, Washington C. H..	1st Tuesday, monthly
Hamilton	R. B. Hall, Cincinnati.....	E. O. Smith, Cincinnati.....	
Higland	T. W. Duvall, Lynchburg.....	J. C. Larkin, Hillsboro.....	1st Wednesday in Jan., April, July and Oct.
Warren	N. A. Hamilton, Franklin.....	Herschel Fisher, Lebanon.....	
Second District.	J. E. Monger, Gettysburg.....	A. C. Messenger, Xenia.....	
Champaign	Robt. Henderson, Urbana.....	D. C. Houser, Urbana.....	2d Thursday, monthly
Clark	C. L. Minor, Springfield.....	P. W. Brown, Springfield....	Every Monday night
Darke	J. D. Hartzell, North Star.....	G. W. Burnett, Greenville.....	
Greene	D. E. Spahr, Clifton.....	R. H. Grube, Xenia.....	
Mercer	J. A. Shirack, St. Henry.....	F. E. Ayers, Celina.....	
Miami	S. D. Hartman, Tippecanoe City	R. L. Kunkle, Piqua.....	1st Thursday, monthly
Montgomery ...	E. M. Huston, Dayton.....	D. B. Conklin, Dayton.....	
Preble	L. R. Mundhank, W. Alexandria	J. W. Coombs, Camden.....	
Shelby	W. A. Grosvenor, Sidney.....	E. A. Yates, Sidney.....	1st Thursday, monthly
Third District..	Thomas Hubbard, Toledo.....	E. A. Murbach, Archbold.....	
Allen	T. M. Johnson, Lima.....	J. M. Lickly, Lima.....	1st and 3d Tuesdays
Auglaize	C. L. Dine, Minster.....	M. J. Longworth, St. Marys..	
Hancock	Don C. Hughes, Findlay.....	E. J. Thomas, Findlay.....	1st Thursday, monthly
Hardin	L. W. Campbell, Ada.....	C. D. McCoy, Kenton.....	
Logan	B. S. Leonard, West Liberty.....	W. C. Pay, Bellefontaine	1st and 2d Tuesdays, monthly
Marion	J. W. Adair, Marion.....	D. O. Weeks, Marion.....	1st Tuesday, monthly
Seneca	J. H. Thompson, Green Spring	E. H. Porter, Tiffin.....	
Van Wert	W. H. Perry, Van Wert.....	C. G. Church, Van Wert.....	1st Wednesday, monthly
Wyandot	G. W. Sampson, Up. Sandusky.	W. M. Smalley, Upper Sandusky	
Fourth District.			
Defiance	W. S. Powell, Defiance.....	J. J. Reynolds, Defiance.....	
Fulton	Chas. N. Heffron, Metamora...	C. S. Campbell, Wauseon.....	
Henry	J. Bloomfield, Napoleon.....	Charles Mowery, Napoleon.....	
Lucas	James A. Duncan, Toledo.....	C. F. Tenney, Toledo.....	
Ottawa	E. B. Huyck, Oak Harbor.....	S. T. Dromgold, Elmore.....	1st Wednesday, monthly
Paulding	L. R. Fast, Latty.....	E. A. Clark, Paulding.....	
Putnam	Frank Light, Ottawa.....	P. D. Bixel, Pandora.....	
Sandusky	M. Stamm, Fremont..	E. M. Ickes, Fremont.....	
Williams	A. E. Snyder, Bryan.....	J. A. Weitz, Montpelier.....	Bi-monthly; 1st Thurs- day each odd month
Wood	E. W. Fisher, Portage.....	Mary A. Wilson, Bowling Green	
Fifth District...	J. A. Dickson, Ashtabula.....	F. K. Smith, Warren.....	
Ashtabula	F. E. Tibbitts, Geneva.....	L. C. Stiles, Austinburg.....	1st Tuesday, monthly
Cuyahoga	Chas. B. Parker, Cleveland...	O. A. Weber, Cleveland.....	Every Friday evening
Erie	J. T. Haynes, Sandusky.....	C. C. Davis, Sandusky.....	4th Wednesday, monthly
Geauga	O. A. Hopkins, Middlefield.....	I. F. Cramton, Burton.....	1st Thursday, monthly
Huron	D. W. Rumbaugh, Chicago Jctn.	W. E. Gill, Norwalk.....	2d Thursday, monthly
Lake	A. P. Brady, Painesville.....	C. M. Hawley, Painesville....	1st Monday, monthly

Societies	President	Secretary	Time of Meeting
Lorain	C. H. Cushing, Elyria.....	George Gill, Elyria.....	
Medina	Platt E. Beach, Seville.....	W. D. Wise, Medina.....	
Trumbull	H. M. Page, Warren.....	F. K. Smith, Warren.....	4th Wednesday of Jan., April, June and Oct.
Sixth District...	S. P. Wise, Millersburg.....	J. H. Sellar, Akron.....	
Ashland	W. H. Wirt, Loudonville.....	W. M. McClellan, Ashland.....	1st Tuesday, Jan., Mar., May, July, Sept., Nov.
Holmes	F. D. Carson, Benton.....	R. C. Wise, Millersburg.....	
Mahoning	H. E. Blott, Youngstown.....	S. M. McCurdy, Youngstown...	
Portage	W. B. Andrews, Kent.....	C. O. Jaster, Ravenna.....	
Richland	J. L. Stevens, Mansfield.....	H. Woltman, Mansfield.....	3d Wednesday, monthly
Starke	J. C. Temple, Alliance.....	G. F. Zinniger, Canton.....	3d Tuesday, Jan., Mch., May, July, Sept., Nov.
Summit	J. H. Weber, Akron.....	H. D. Todd, Akron.....	
Wayne	L. A. Yocum, Wooster.....	H. M. Yoder, Smithville.....	2d Tuesday in Jan., April July and Oct.
Seventh Dist...	J. S. McClellan, Bellaire.....	A. C. Beetham, Bellaire.....	
Belmont	A. C. Beetham, Bellaire.....	J. S. McClellan, Bellaire.....	Last Wednesday
Carroll	J. R. Williams, Carrollton.....	J. J. Hathaway, Carrollton....	
Columblana ...	W. N. Calhoun, Leetonia.....	S. A. Conrad, Leetonia.....	2d Tuesday, monthly
Coshocton	E. C. Carr, Coshocton.....	J. D. Lower, Coshocton.....	
Harrison	Ward Anderson, Scioto.....	R. P. Rusk, Cadiz.....	
Jefferson	J. Robertson, Steubenville.....	J. R. Mossgrrove, Steubenville..	2d Tuesday, monthly
Monroe	J. W. Norris, Woodsfield.....	J. R. Parry, Woodsfield.....	
Tuscarawas ...	J. A. McCollam, Urichsville...	Geo. T. Haverfield, Uhrichsville..	1st Tuesday, monthly
Eighth District.	N. T. McTeague, New Lexington	W. E. Wright, Newark.....	
Athens	A. L. Pritchard, Athens.....	D. H. Biddle, Athens.....	
Guernsey	O. F. Lowry, Cambridge.....	Fred W. Lane, Cambridge.....	1st and 3d Tuesday of each month
Licking	B. F. Barnes, Newark.....	W. E. Wright, Newark.....	1st Tuesday, monthly
Morgan	J. E. Brown, McConnellsville...	Wm. C. Leeper, McConnellsville	
Muskingum	R. B. Bainter, Zanesville.....	J. R. McDowell, Zanesville...	
Noble	W. S. Williams, Caldwell.....	F. R. Dew, Belle Valley.....	
Perry	J. W. Croft, Corning.....	J. G. McDougal, New Lexington	1st Tuesday, monthly
Washington ...	H. N. Curtis, Marietta.....	F. S. McGee, Marietta.....	
Ninth District..	P. J. Kline, Portsmouth.....	J. S. Rardin, Portsmouth.....	
Gallia	William Miller, Thurman.....	G. J. Kineon, Gallipolis.....	
Jackson	Gomer E. Jones, Jackson.	W. J. Ogler, Wellston.....	
Lawrence	T. H. Remy, Hanging Rock....	O. U. O'Neill, Ironton.....	4th Thursday, monthly
Melgs	L. F. Roush, Pomeroy.....	David Sisson, Middleport.....	1st Wednesday in April, July and October
Pike	I. P. Sellar, Piketon.....	L. E. Wills, Omega.....	1st Monday, monthly
Scioto	C. Flint Kline, Portsmouth.....	W. E. Gault, Portsmouth.....	2d Monday, monthly
Vinton	W. H. Henry, Hamden Junction	W. T. Cherry, McArthur.....	4th Wednesday, monthly
Tenth District..	G. W. Morehouse, Delaware...	Fred Fletcher, Columbus.....	
Crawford	A. E. Loyer, New Washington.	J. A. Agnew, Crestline.....	2d Tuesday, monthly
Delaware	W. H. Woodworth, Delaware..	G. W. Morehouse, Delaware....	1st Friday, monthly
Fairfield	H. A. Brown, Carroll.....	R. W. Mondhank, Lancaster...	3d Tuesday, monthly
Franklin	Chas. J. Shepard, Columbus...	Fred Fletcher, Columbus.....	1st and 3d Monday
Knox	W. H. Eastman, Fredericktown.	F. L. Singrey, Mt. Vernon.....	2d Friday, monthly
Madison	A. J. Strain, London.....	A. Delaplane, South Solon.....	Last Friday, monthly
Morrow	W. C. Bennet, Mt. Gilead.....	R. L. Pierce, Mt. Gilead.....	1st Wednesday, monthly
Ross	Frank T. Marr, Chillicothe....	R. E. Bower, Chillicothe.....	2d and 4th Tuesday
Union	P. D. Longbrake, Marysville...	C. W. Hoopes, Marysville.....	
Pickaway	H. C. Allen, Circleville.....	A. W. Holman, Circleville.....	1st Friday, monthly

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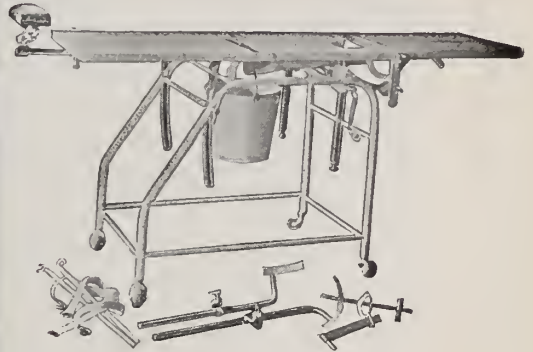


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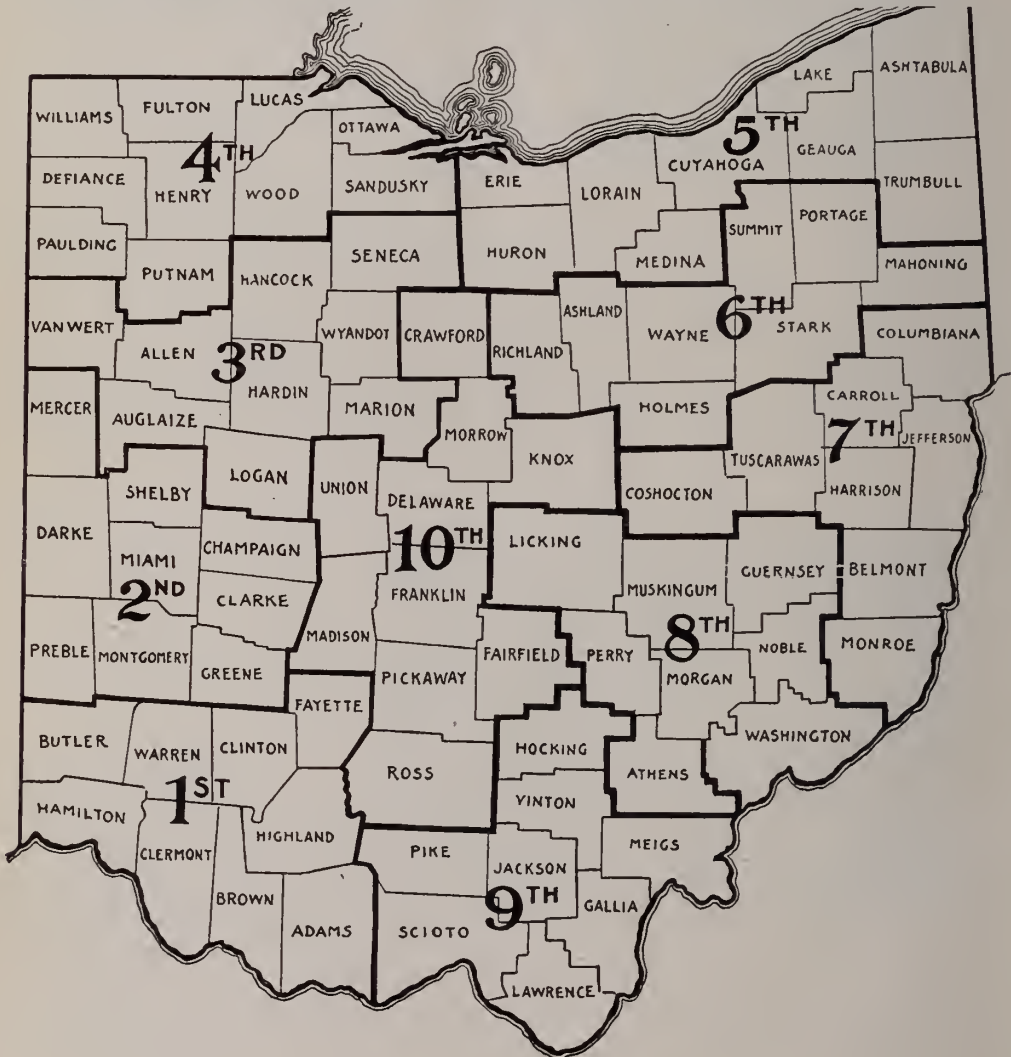
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ROLL OF DISTRICT AND COUNTY SOCIETIES

Societies	President	Secretary	Time of Meeting
First District...	H. J. Death, Franklin.....	John Miller, Cincinnati.....	
Adams	W. B. Loney, West Union.....	O. T. Sproull, West Union.....	2d Wednesday in April, June, Aug and Oct.
Brown	A. W. Francis, Ripley.....	A. W. Mitchell, Georgetown....	4th Wednesday in Feb., May, August and Nov.
Butler	H. L. Burdsall, Hamilton.....	Henry Krone, Hamilton.....	2d Tuesday, monthly
Clermont	T. A. Mitchell, Owensville...	E. O. Ireton, Marathon.....	1st month of each week
Clinton	G. M. Austin, Wilmington....	Frank A. Peelle, Wilmington...	Last Thursday, monthly
Fayette	W. E. Ireland, Moons.....	L. W. Pine, Washington C. H....	1st Tuesday, monthly
Hamilton	S. E. Allen, Cincinnati.....	E. O. Smith, Cincinnati.....	1st month of each week
Highland	T. W. Duvall, Lynchburg.....	J. C. Larkin, Hillsboro.....	1st Wednesday in Jan., April, July and Oct.
Warren	N. A. Hamilton, Franklin.....	Herschel Fisher, Lebanon.....	2d Tuesday April, May, June, July, Sept. and Oct.
Second District.	A. C. Messenger, Xenia.....	C. L. Minor, Springfield.....	
Champaign	Robt. Henderson, Urbana.....	J. D. O'Gara, Urbana.....	2d Thursday, monthly
Clark	C. L. Minor, Springfield.....	D. W. Brown, Springfield.....	Every Monday night
Darke	Chas. Baker, Palestine.....	G. W. Burnett, Greenville.....	2d Thursday each month
Greene	W. L. Rouse, Paintersville...	R. H. Grube, Xenia.....	1st Thursday each month
Mercer	M. L. Downing, Rockford....	F. E. Ayers, Celina.....	
Miami	R. M. Shannon, Piqua.....	R. L. Kunkle, Piqua.....	1st Thursday, monthly
Montgomery ..	H. C. Haning, Dayton.....	J. D. Kramer, Dayton.....	1st and 3d Fridays each month
Preble	L. R. Mundhank, W. Alexandria	J. W. Coombs, Camden.....	
Shelby	W. A. Grosvenor, Sidney.....	E. A. Yates, Sidney.....	1st Thursday, monthly
Third District..	D. O. Weeks, Marion.....	E. A. Murbach, Archbold.....	
Allen	J. H. Huntley, Lima.....	T. T. Sidener, Lima.....	1st and 3d Tuesdays
Auglaize	C. L. Dine, Minster.....	M. J. Longworth, St. Marys...	3d Thursday
Hancock	A. S. Raycroft, Fostoria.....	E. H. Cooper, Findlay.....	1st Thursday, monthly
Hardin	L. W. Campbell, Ada.....	C. D. McCoy, Kenton.....	3d Thursday of month
Logan	B. S. Leonard, West Liberty....	W. C. Pay, Bellefontaine	1st and 2d Thursdays monthly
Marion	H. S. Rhu, Marion.....	A. M. Crane, Marion.....	1st Tuesday, monthly
Seneca	J. H. Thompson, Green Spring	E. H. Porter, Tiffin.....	3d Thursday, monthly
Van Wert	W. H. Perry, Van Wert.....	C. G. Church, Van Wert.....	1st Wednesday, monthly
Wyandot	G. W. Sampson, Up. Sandusky.	W. M. Smalley, Upper Sandusky	
Fourth District.			
Defiance	W. S. Powell, Defiance.....	J. J. Reynolds, Defiance.....	2d Wednesday, monthly
Fulton	Thomas Blair, Lyons.....	Wm. H. Maddox, Wauseon....	1st Wednesday, monthly
Henry	J. Bloomfield, Napoleon.....	Charles Mowery, Napoleon.....	
Lucas	John G. Keller, Toledo.....	C. F. Tenney, Toledo.....	
Ottawa	H. J. Pool, Oak Harbor.....	S. T. Dromgold, Elmore.....	1st Wednesday, monthly
Paulding	E. D. Murphy, Antwerp....	R. J. Dillery, Paulding.....	3d Wednesday of month
Putnam	Frank Light, Ottawa.....	P. D. Bixel, Pandora.....	1st Thursday of month
Sandusky	M. Stamm, Fremont..	E. M. Ickes, Fremont.....	4th Wednesday, monthly
Williams	A. E. Snyder, Bryan.....	J. A. Weltz, Montpelier.....	Bi-monthly; 2d Thurs- day each odd month
Wood	E. W. Fisher, Portage.....	Mary A. Wilson, Bowling Green	1st Wednesday of month
Fifth District...	J. A. Dickson, Ashtabula.....	F. K. Smith, Warren.....	
Ashtabula	F. E. Tibbitts, Geneva.....	L. C. Stiles, Austinburg.....	1st Tuesday, monthly
Cuyahoga	Chas. B. Parker, Cleveland...	O. A. Weber, Cleveland.....	Every Friday evening
Erie	J. T. Haynes, Sandusky.....	C. C. Davis, Sandusky.....	4th Wednesday, monthly
Geauga	O. A. Hopkins, Middlefield....	I. F. Cramton, Burton.....	2d Thursday Jan., Mch., July and Sept.
Huron	D. W. Rumbaugh, Chicago Jctn.	W. E. Gill, Norwalk.....	2d Thursday, monthly
Lake	J. W. Lowe, Mentor.....	H. L. Spence, Painesville...	1st Monday, monthly

Societies	President	Secretary	Time of Meeting
Lorain.....	J. S. Mead, Lorain.....	L. D. Hurd, Lorain.....	2d Tuesday, monthly
Medina	Platt E. Beach, Seville.....	W. D. Wise, Medina.....	
Trumbull	H. M. Page, Warren.....	F. K. Smlth, Warren.....	4th Wednesday of Jan., April, June and Oct.
Sixth District...	J. F. Marchand, Canton.....	J. H. Seller, Akron.....	2d Tuesday in Feb., Aug. and Nov.
Ashland	W. F. Emery, Ashland.....	W. M. McClellan, Ashland.....	1st Tuesday, Jan., Mar., May, July, Sept., Nov.
Holmes	F. D. Carson, Benton.....	R. C. Wise, Millersburg.....	
Mahoning	W. H. Buechner, Youngstown.	S. M. McCurdy, Youngstown...	3d Tuesday of month
Portage	W. W. White, Ravenna.....	C. O. Jaster, Ravenna.....	2d Tuesday of month
Richland	W. E. Loughridge, Mansfield...	J. M. Garber, Mansfield.....	3d Wednesday, monthly
Starke	T. Clarke Miller, Massillon...	G. F. Zinninger, Canton.....	3d Tuesday, Jan., Mch., May, July, Sept., Nov.
Summit	E. A. Weeks, Akron.....	G. M. Logan, Akron.....	1st Tuesday of month
Wayne	L. A. Yocum, Wooster.....	H. M. Yoder, Smithville.....	2d Tuesday in Jan., April July and Oct.
Seventh Dist...	J. A. McCollam, Uhrichsville..	Ward Anderson, Scio.....	
Belmont	P. L. Ring, Shadyside.....	J. S. McClellan, Bellaire.....	Last Wednesday
Carroll	J. R. Williams, Carrollton.....	J. J. Hathaway, Carrollton....	
Columbiana ...	Wm. E. Morris, Lisbon.....	J. Howard Davis, E. Liverpool.	2d Tuesday, monthly
Coshocton	E. C. Carr, Coshocton.....	J. D. Lower, Coshocton.....	Quarterly
Harrison	Ward Anderson, Scio.....	R. P. Rusk, Cadiz.....	
Jefferson	W. E. Kerr, Steubenville.....	J. R. Mossgrove, Steubenville..	2d Tuesday, monthly
Monroe	J. W. Norris, Woodsfield.....	J. R. Parry, Woodsfield.....	
Tuscarawas ...	J. A. McCollam, Uhrichsville..	Geo. T. Haverfield, Uhrichsville..	1st Tuesday, monthly
Eighth District.	W. A. Melick, Zanesville.....	W. E. Wright, Newark.....	
Athens	A. L. Pritchard, Athens.....	D. H. Biddle, Athens.....	
Guernsey	C. A. Frame, Cambridge.....	P. M. Mitchell, Cambridge....	1st and 3d Tuesday of each month
Licking	B. F. Barnes, Newark.....	W. E. Wright, Newark.....	1st Thursday, monthly
Morgan	J. E. Brown, McConnellsville...	Wm. C. Leeper, McConnellsville	
Muskingum	R. B. Bainter, Zanesville.....	J. R. McDowell, Zanesville...	3d Wednesday, monthly
Noble	W. S. Williams, Caldwell.....	F. R. Dew, Belle Valley.....	
Perry	J. M. Dennison, Crooksville...	J. G. McDougal, New Lexington	1st Tuesday, monthly
Washington ...	H. N. Curtis, Marietta.....	F. S. McGee, Marietta.....	
Ninth District..	W. H. Henry, Hamden Junction	I. P. Seller, Piketon.....	
Gallia	Mary L. Austin, Gallipolis....	Ella G. Lupton, Gallipolis....	1st Wednesday of each month
Jackson	W. R. Evans, Jackson.....	W. J. Ogier, Wellston.....	1st Tuesday of each month
Lawrence	Wm. F. Marting, Ironton....	O. U. O'Neill, Ironton.....	4th Thursday, monthly
Meigs	D. B. Hartinger, Pomeroy....	J. N. Gilliford, Middleport...	1st Wednesday in April, July and October
Hocking Co....	W. S. Rhodes, Carbon Hill...	E. H. Hayman, Murray.....	
Pike	I. P. Seller, Piketon.....	L. E. Wills, Omega.....	1st Monday, monthly
Scioto	Jas. W. Fitch, Portsmouth....	J. S. Rardin, Portsmouth....	2d Monday, monthly
Vinton	W. H. Henry, Hamden Junction	W. T. Cherry, McArthur.....	4th Wednesday, monthly
Tenth District..	G. W. Morehouse, Delaware...	Fred Fletcher, Columbus.....	
Crawford	J. J. Martin, Bucyrus.....	C. A. Ulmer, Bucyrus.....	2d Thursday, monthly
Delaware	W. H. Woodworth, Delaware..	G. W. Morehouse, Delaware....	1st Friday, monthly
Fairfield	H. R. Plum, Lancaster.....	R. H. Smith, Lancaster.....	3d Tuesday, monthly
Franklin	J. A. Van Fossen, Columbus..	Fred Fletcher, Columbus.....	1st and 3d Monday
Knox	W. H. Eastman, Fredericktown.	I. S. Workman, Gambier.....	2d Friday, monthly
Madison	A. J. Strain, London.....	W. W. Snyder, London.....	Last Friday, monthly
Morrow	D. B. Virtue, Iberia.....	R. L. Pierce, Mt. Gilead.....	1st Wednesday, monthly
Ross	Frank T. Marr, Chillicothe....	R. E. Bower, Chillicothe.....	2d and 4th Tuesday
Union	A. L. Burson, Irwin.....	Angus McIvor, Marysville....	
Pickaway	H. C. Allen, Circleville.....	A. W. Holman, Circleville.....	1st Friday, monthly

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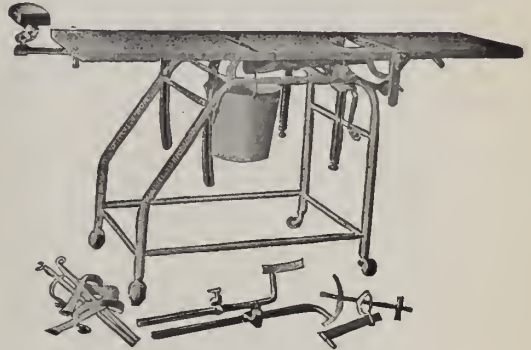
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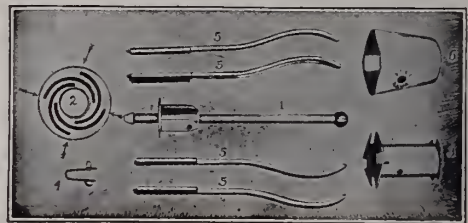
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NEXT MEETING, TOLEDO, MAY 11th, 12th and 13th

Vol. VI

FEBRUARY 15, 1910

No. 2

THE OHIO
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FREDERICK BRUSH, M. D., Medical Superintendent.

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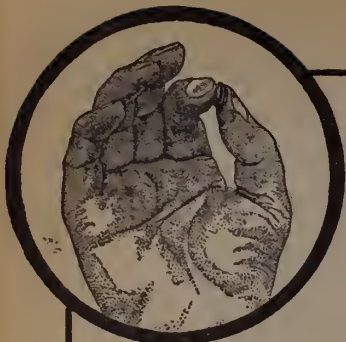
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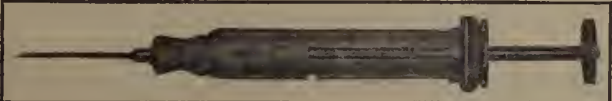
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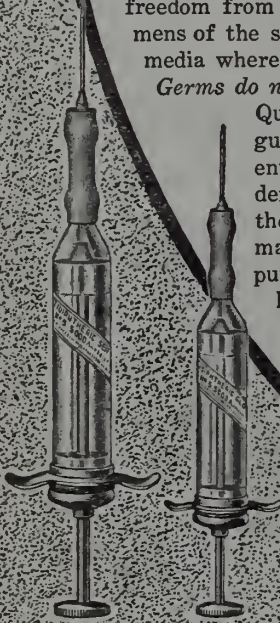


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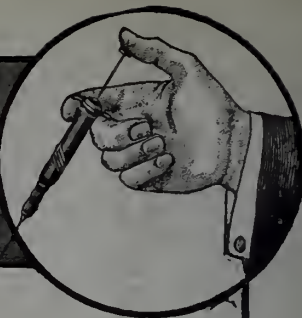
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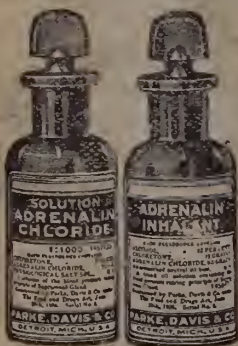
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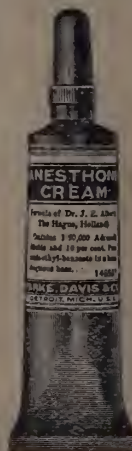
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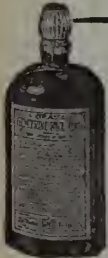
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